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WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 1. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., January 4, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended January 4, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended December 15 corresponded to an annual rate of 18.9 a thousand of the aggregate population, which is estimated at 9,398,273. The lowest rate was recorded in Halifax, viz., 11.7, and the highest in Blackburn, viz., 32.4 a thousand. Diphtheria caused 6 deaths in Manchester, 3 in Liverpool, 2 in Salford, and 2 in Portsmouth. Small-pox caused 1 death in Hull and 1 in Cardiff.

London.—One thousand four hundred and fifty-five deaths were registered during the week, including measles, 154; scarlet fever, 17; diphtheria, 39; whooping-cough, 14; enteric fever, 18; diarrhœa and dysentery, 11. The deaths from all causes corresponded to an annual rate of 17.7 a thousand. Diseases of the respiratory organs caused 330 deaths; different forms of violence, 40; and 5 cases of suicide were registered. In greater London 1,817 deaths were registered, corresponding to an annual rate of 17.2 a thousand of the population. In the "outer ring" the deaths included measles, 22; diphtheria, 5.

Ireland.—The average annual death rate represented by the deaths registered during the week ended December 15 in the 16 principal town districts of Ireland was 22.7 a thousand of the population. The lowest rate was recorded in Drogheda, viz., 8.5, and the highest in Sligo, viz., 43.3 a thousand. In Dublin 180 deaths were registered, including measles, 4; whooping-cough, 2; enteric fever, 6; typhus, 2; scarlet fever, 3; diphtheria, 1, diarrhœa, 1; and erysipelis, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended December 15, corresponded to an annual rate of 19.3 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Leith, viz., 13.3, and the highest in Paisley, viz., 33.7 a thousand. The aggregate number of deaths registered from all causes was 448, including measles, 14; scarlet fever, 7; diphtheria, 8; whooping-cough, 4; fever, 3, and diarrhœa, 13.

Denmark.—The following is a translation of a quarantine order issued by the government of Denmark, under date of November 26, 1888:

The proclamation of the Ministry of Justice dated September 15, 1887, with reference to section 2, paragraph 1 of the law of July 2, 1880, providing against the importation of contagious diseases into the kingdom and ordering inspection of ships coming from ports in the East Indies is hereby discontinued in regard to the Dutch East Indies, but remains in force in other respects.

Quarantine will henceforth be discontinued.

The provisions of section 2, paragraph 1, of the law of July 2, 1880, referring to precautionary measures against the introduction of contageous diseases into the kingdom are hereafter to be enforced with reference to the following places:

Marseilles; all Sicilian ports; ports on the French coast between Nantes and St. Malo, both inclusive; Egernsund; all ports in Chili; all ports in Florida; all ports in Jamaica; all ports in Martinique; all ports in Guadeloupe; St. Iago de Cuba; ports in Tonkin and Cochin China, and in the East Indies, excepting the Dutch East Indian Colonies; Trieste; all ports in Egypt; all ports on the Red Sea, Rio de Janeiro, and Havana.

The prohibition against the importation into the Kingdom of used linen, used articles of clothing, and used bed-clothes, providing the articles named do not constitute the personal effects of travelers, waste cotton or wool, refuse paper, hair and hides, remains in force in reference to the following places:

Marseilles; Sicilian ports; ports on the French coast between Nantes and St. Malo, both inclusive; Egernsund; all ports in Florida; all ports in Jamaica; all ports in Martinique; all ports in Guadeloupe; St. Iago de Cuba; ports in Tonkin and Cochin China and the East Indies, excepting the Dutch East Indian Colonies; and all ports in Chili. The prohibition against the importation into the Kingdom of used linen, used articles of clothing, and used bed-clothes, providing the articles named do not constitute personal effects of travelers, remains in force in reference to Rio de Janeiro and Havana. In addition thereto special attention is to be paid to the cleansing under official inspection of linen, clothing, and bed-clothes brought from either of the last two places as the personal effects of travelers.

This order to go into effect at once.

Canary Islands.—The Minister of Spain informs the Secretary of State, under date of December 17, 1888, that the Spanish Government has ordered that "all vessels coming from the Canary Islands, except those coming from the Island of Santa Cruz de la Palma (which is one hundred and fifty nautical miles from the nearest island of the afore-

said group), shall be admitted to free intercourse with Spanish ports. The government of Spain has taken all necessary measures of isolation in the rest of the Canary Archipelago, and has declared none but the aforesaid island of Santa Cruz to be infected. The undersigned, consequently, in pursuance of the instructions of his government, hastens to inform that of the United States that American vessels may, without the slightest danger, enter the ports of the Canary Islands, excepting those of Santa Cruz de la Palma. This information is furnished with a view to preventing the injury that would otherwise accrue to merchant vessels and to commerce in general."

Malta aad Gozo.—Three hundred and sixty-five deaths were registered during the month of November, 1888; including measles, 11; whooping-cough, 3; diphtheria, 4; enteric fever, 2; and dysentery, 7.

Netherlands.—The deaths registered in the principal cities of the Netherlands, having an aggregate population of 1,129,678, corresponded to an annual rate of 21.1 a thousand. The lowest rate was recorded in Dordrecht, viz., 16.3; and the highest in Hertogenbosch, viz., 30.5.

Guaymas, Mexico.—The United States consul reports, under date of November 30, "No particular epidemical sickness in this consular district. Sanitary condition good."

Cardenas, Cuba.—The United States consul reports, under date of December 21, "Health of town and harbor good. Weather clear and cool."

Nassau, N. P.—The United States consul reports, under date of December 22, "City healthy. Weather cool and dry."

Cartagena, U. S. of Colombia.—The United States consul reports, under date of December 8, "No deaths from Beri Beri during week. Five fatal cases of sporadic yellow fever have occurred amongst newly arrived troops. It is not epidemic. Unseasonable weather has raised the death rate."

Trapani, Italy.—One hundred and seventeen deaths from small-pox were registered during the month of November, almost all of them children not vaccinated.

Palermo, Italy.—Nine deaths from small-pox were registered during the month of November.

Georgetown, Demerara.—One hundred and sixty-one deaths were registered during the month of October, 1888, including fever, 5; diarrhoea, 2; dysentery, 3; and yellow fever 1.

San Juan, Porto Rico.—There were two cases of yellow fever, but no deaths from that disease during the week ended December 1, 1888.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Dec. 8	2,260,945	942	.....	.....	4	.....	17	3	42	37	5
Paris	Dec. 15	2,260,945	984	.....	.....	2	.....	10	.....	40	38	3
Glasgow	Dec. 15	545,678	211	.....	.....	.....	.....	2	3	4	.....	.....
Rio de Janeiro	Dec. 2	450,000	230	.....	10	3	2	4	.....	.....	.....	.....
Warsaw	Dec. 8	444,814	222	.....	.....	10	.....	.....	12	12	.....	.....
Calcutta	Nov. 10	433,219	238	45	.....	.....	.....	.....	.....	.....	.....	.....
Calcutta	Nov. 17	433,219	261	63	.....	.....	.....	.....	.....	.....	.....	.....
Amsterdam	Dec. 15	389,916	159	.....	.....	.....	.....	1	1	5	.....	.....
Munich	Dec. 1	275,000	151	.....	.....	.....	.....	2	3	9	.....	.....
Palermo	Dec. 15	250,000	73	.....	.....	.....	.....	.....	.....	1	.....	.....
Belfast	Dec. 15	227,622	88	.....	.....	.....	.....	3	.....	2	.....	.....
Bristol	Dec. 8	226,510	63	.....	.....	.....	.....	2	1	.....	.....	.....
Bristol	Dec. 15	226,510	66	.....	.....	.....	.....	.....	.....	1	.....	.....
Genoa	Dec. 15	179,910	99	.....	.....	4	.....	.....	.....	.....	.....	.....
Trieste	Dec. 8	154,500	74	.....	.....	3	.....	1	.....	1	.....	.....
Stuttgart	Dec. 15	125,510	41	.....	.....	.....	.....	.....	.....	1	.....	.....
Bremen	Dec. 8	122,000	39	.....	.....	.....	.....	1	.....	2	.....	.....
Pernambuco	Nov. 27	110,000	84	.....	.....	.....	.....	1	.....	.....	.....	.....
Barmen	Dec. 8	109,000	28	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leghorn	Dec. 16	102,540	51	.....	.....	.....	.....	1	.....	1	.....	.....
Cadiz	Dec. 8	65,028	51	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Dec. 15	65,028	52	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Dec. 20	23,800	32	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Dec. 9	23,631	9	.....	.....	.....	.....	1	.....	.....	.....	.....
San Juan, Porto Rico	Nov. 10	23,000	10	.....	1	.....	.....	.....	.....	.....	.....	.....
San Juan, Porto Rico	Nov. 17	23,000	9	.....	1	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Dec. 28	17,300	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bluefields, Nic	Dec. 14	2,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

TAMPA, FLA.—The following proclamation has been issued:

TAMPA, FLA., *December* 20, 1888.

At the meeting of the Hillsborough County Board of Health held in this city yesterday the following resolutions were adopted:

Whereas there have been no new cases of yellow fever in Tampa since the 3d instant, and the county and city being entirely free from yellow fever

Resolved 1, That the board of health hereby officially declares the city of Tampa, and the County of Hillsborough, free from the presence of any and all infectious and contagious diseases; and that in our opinion no risk from yellow fever would be incurred by unacclimated persons visiting and residing in Tampa, or any place in the county.

Resolved 2, That as there have only been 10 deaths from yellow fever in the city of Tampa, during the summer and fall of 1888, it is very evident that Tampa has not suffered from any very extensive epidemic. Furthermore, in all houses where the disease has prevailed, so far as known to the board of health, all necessary measures to eradicate the poison, have been taken; so that the board of health feels justified in declaring that no apprehension need be entertained on that account by people wishing to come to Tampa, and Hillsborough County.

JOHN P. WALL, M. D.,
President.

Attest:—D. POST,
Secretary.

Gainesville, Fla.—The following letter has been received:

GAINESVILLE, FLA., *December* 26, 1888.

MY DEAR SIR: I have before me a report of a speech made by you at Norfolk, Va., about the first of last month, at the annual meeting of the Virginia Medical Society, in the course of which you made the following statement:

"The fever had been introduced into Gainesville and Fernandina by base-ball players who had played a game of ball in Jacksonville before the epidemic character of the disease had been declared, and then returned to those cities." So far as Gainesville is concerned, I assure you this statement is untrue, and as a board of health, we feel that it does us great injustice, if it is to be accepted as a fact. The game of ball of which you speak was played as early as the 18th, 19th, and 20th of July, and from this date until the Gainesville Guards returned from Fernandina, on the 11th of September, no town or city in the State, I am sure, was healthier than Gainesville.

By the 15th of September, or within four days after the return of the Guards from Fernandina, six of them were down with yellow fever, and these *were the first* cases that occurred here. Just as soon as they developed sufficiently to make the diagnosis clear (on the evening of the 16th), you were notified by wire, and its existence here was published to the world.

I am sure Doctor Posey, in his examinations here some days prior to this date, did not find any yellow fever. And I am equally sure Doctor Martin, in his subsequent investigations, found no evidence of any fever here prior to the return of our military company from Fernandina.

Believing that you would not intentionally do us an injustice, I write to ask if you will not either make the correction in some public way or give us the evidence upon which you made the statement, that we may be able to refute it.

Yours very truly,

N. D. PHILLIPS,
Acting President, Board of Health.

Surgeon-General J. B. HAMILTON,
Washington, D. C.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Dec. 29	1,548,628	772	.....	.....	.....	.....	.....	.....	4	51	40	21	19
Philadelphia, Pa.	Dec. 28	1,016,758	367	.....	.....	.....	.....	.....	.....	6	14	13	.....	2
Chicago, Ill.	Dec. 22	800,000	227	.....	.....	.....	.....	.....	.....	3	4	29	1	1
Chicago, Ill.	Dec. 29	800,000	289	.....	.....	.....	.....	.....	.....	14	4	26	4	3
Baltimore, Md.	Dec. 29	431,879	163	.....	.....	.....	.....	.....	.....	4	.....	3	.....	.....
San Francisco, Cal.	Dec. 22	330,000	96	.....	.....	1	.....	.....	.....	.....	1	2	.....	2
Cincinnati, Ohio.	Dec. 29	255,139	84	.....	.....	.....	.....	.....	.....	4	.....	2	.....	.....
New Orleans, La.	Dec. 22	248,000	132	.....	.....	.....	.....	.....	.....	1	1	2	.....	1
Pittsburgh, Pa.	Dec. 29	230,000	68	.....	.....	.....	.....	.....	.....	6	.....	1	.....	.....
Cleveland, Ohio.	Dec. 1	227,861	63	.....	.....	.....	.....	.....	.....	2	1	4	.....	.....
Milwaukee, Wis.	Dec. 29	195,000	58	.....	.....	.....	.....	.....	.....	1	4	3	.....	.....
Kansas City, Mo.	Dec. 29	180,000	36	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Minneapolis, Minn.	Dec. 22	180,000	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newark, N. J.	Dec. 18	178,000	74	.....	.....	.....	.....	.....	.....	4	.....	7	.....	1
Newark, N. J.	Dec. 25	178,000	65	.....	.....	.....	.....	.....	.....	1	.....	6	.....	.....
St. Paul, Minn.	Dec. 29	175,000	35	.....	.....	.....	.....	.....	.....	3	.....	2	1	.....
Rochester, N. Y.	Dec. 28	120,000	37	.....	.....	.....	.....	.....	.....	1	.....	5	.....	.....
Detroit, Mich.	Dec. 29	116,340	61	.....	.....	.....	.....	.....	.....	.....	1	7	.....	.....
Richmond, Va.	Dec. 24	100,000	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Denver, Colo.	Dec. 28	96,000	41	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....
Toledo, Ohio.	Dec. 28	80,000	17	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Camden, N. J.	Dec. 27	70,000	32	.....	.....	.....	.....	.....	.....	5	.....	1	.....	.....
Nashville, Tenn.	Dec. 29	65,153	16	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Charleston, S. C.	Dec. 22	60,145	39	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Charleston, S. C.	Dec. 29	60,145	33	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	Dec. 29	50,000	15	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Manchester, N. H.	Dec. 22	41,000	16	.....	.....	.....	.....	.....	.....	1	.....	5	.....	.....
Portland, Me.	Dec. 29	40,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Dec. 21	40,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Saginaw, Mich.	Dec. 29	33,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Burlington, Iowa	Dec. 28	30,166	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	Dec. 22	30,000	4	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Auburn, N. Y.	Dec. 29	26,000	7	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Haverhill, Mass.	Dec. 29	25,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Dec. 27	22,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Dec. 29	21,105	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Ia.	Dec. 29	16,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 2. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., January 11, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended January* 11, 1889, *and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended December 22 corresponded to an annual rate of 22.2 a thousand of the aggregate population, which is estimated at 9,398,273. The lowest rate was recorded in Derby, viz., 13.6, and the highest in Wolverhampton, viz., 33.8 a thousand. Diphtheria caused 8 deaths in Manchester, 4 in Salford, and 2 in Nottingham.

London.—One thousand eight hundred and two deaths were registered during the week, including measles, 184; scarlet fever, 25; diphtheria, 39; whooping-cough, 25; enteric fever, 12; diarrhœa and dysentery, 16. The deaths from all causes corresponded to an annual rate of 22.0 a thousand. Diseases of the respiratory organs caused 440 deaths; different forms of violence, 81; and 8 cases of suicide were registered. In greater London 2,207 deaths were registered, corresponding to an annual rate of 20.8 a thousand of the population. In the "outer ring" the deaths included measles, 20; diphtheria, 6.

Ireland.—The average annual death rate represented by the deaths registered during the week ended December 22 in the 16 principal town districts of Ireland was 22.2 a thousand of the population. The lowest rate was recorded in Waterford, viz., 4.6, and the highest in Sligo, viz., 36.1 a thousand. In Dublin 209 deaths were registered, including measles, 3; whooping-cough, 7; enteric fever, 3; typhus, 1; scarlet fever, 1; diphtheria, 1, diarrhœa, 1; and erysipelas, 2.

Palermo, Italy.—The United States consul, in his dispatch dated September 6, states that "small-pox has obtained in the district to a small extent for some time, and bills of health have been issued from this consulate accordingly. The cases and death rate, however, were so small that it was not deemed important to submit the matter formally to the Department, but as the deaths threrefrom at Trapàni during the month of August reached 124, it is now thought proper to do so."

Bahia, Brazil.—The United consul, under date of December 18, states that "the sanitary condition of this city and the adjacent country is good, and without any suspicion of plague, cholera, or other contagious disease whatever."

Cartagena, U. S. of Colombia.—December 15: "No more cases of, or deaths from beri beri or yellow fever. No epidemic."

Montevideo, Uruguay.—The United States consul reports, under date of October 31, that there were 368 deaths registered during the month of October, 1888, including 10 from small-pox, and 4 from enteric and typhus fever. "The sanitary condition of the city is good. There is some small-pox in the city all the time. The official reports do not report it correctly. Cholera is expected this summer, as reports here circulated state that it is on the Pacific coast."

Cardenas, Cuba.—The United States consul reports, under date of December 29, 1888, that "the weather is cool and dry. No fever, but cases of small-pox in the town, and rather on the increase."

Maceio, Brazil.—Forty-six deaths were registered during the month of November, 1888, including 17 from small-pox.

Havana, Cuba.—The United States sanitary inspector reports as follows:

HAVANA, ISLAND OF CUBA, *January* 2, 1889.

SIR: I have the honor to inform you that there were 571 deaths in this city during the month of December. Twenty-six of those deaths are reported to have been caused by yellow fever, 26 by pernicious fever, 1 by paludal fever, 7 by typhoid fever, 2 by small-pox, 1 by diphtheria, 2 by croup, and 3 by glanders. Twenty-six dying of pernicious fever, while during the same time only 1 died of any other form of paludal fever, leads us to suspect that pernicious symptoms due to yellow fever may have been confounded with those produced by malarial poison. That disgusting and terribly-fatal disease, glanders, has caused three deaths during the last month in this city, one of the victims being a private gentleman.

Very respectfully, your obedient servant,

D. M. BURGESS,
Sanitary Inspector Marine-Hospital Service.

To Surgeon-General HAMILTON.

Havana, Cuba.—There were 5 deaths from yellow fever and 1 from small-pox during the week ended December 21, and the same number for the week ended December 29, 1888. During the week ended January 3, there were 3 deaths from yellow fever.

Havana, Cuba—Shipment of infected ballast—Danger of yellow fever contamination at wharves.—The following communication has been received:

"Havana vessels loading for American ports after 1st May have little to bring except fruit and cigars, and take in sand ballast at times at the yellow fever hospital wharf. This sand is discharged at the ports, and the hot suns of July and August will develop naturally the disease. All seaports are interested, and quarantine does not meet the emergency."

The communication was referred to the United States sanitary inspector at Havana, Cuba, for his information, and he has made the following report, supplemental to that of December 14, 1888 (see Abstract No. 52):

HAVANA, ISLAND OF CUBA, *January* 2, 1889.

SIR: A communication relative to vessels carrying yellow fever in sand ballast, &c., which you have referred to me for my information and report has been received.

In reply I would say, that if I interpret the document correctly, it chronologically refers to a period in 1876 and 1877—some years before there was an United States sanitary inspector appointed at this port. However, I was living here at that time and know that several Spanish vessels in the spring and early summer months of the year 1876, bound for Savannah, took in for ballast the most objectionable and dangerous material—dirt, &c., scraped up from a level with the water of the harbor and saturated with the filth of surrounding habitations—dwellings in which there was sickness at the time. These vessels sailed from here and in due time arrived at Savannah. I was informed where that ballast was discharged and of the circumstances attending the first cases of yellow fever, which preluded the fearful epidemic at that place in 1876, and my own personal belief has been, and is now, that that epidemic was caused by that ballast which was carried there in those vessels. I have understood that for several years past, vessels for Savannah, with ballast from this place, are made to discharge it near the sea and entirely away from any population.

Since the year 1880, or thereabouts, I have not known vessels bound to the United States to take in such excessively bad ballast, probably from the warnings of your sanitary inspector.

However, there is a class of vessels, some of which go to ports in the United States, which have and still continue to take on more or less ballast at wharves in this city. They are mostly Spanish barks or ships, and are so constructed that they cannot, it is thought, be entirely discharged without taking in ballast or some weight toward the conclusion of the process to keep them from tipping over. In other words, they are built so crank that they cannot stand up without some ballast in them. As I have said, these vessels discharge usually at wharves on the Havana side of the harbor, and there they take in a

portion of their ballast often, and then go out into the bay to complete the ballasting process. For several years past this ballast has come from the hills back of the town of Regla, on the opposite side of the harbor from Havana.

It is brought down from those elevations and dumped on the shore in the immediate suburbs of Regla, where it remains until some vessel requires it. In a sanitary sense it is more or less injured by its treatment by that population without doubt. When needed it is shoveled up and put aboard of lighters and carried along side of the vessels and put aboard in baskets. Although none of it is put on the wharves on the Havana or freight side of the harbor, it none the less shares with the vessel the deleterious influences of that locality. The Havana ballast usually consists of earth mixed with a soft-friable crumbling grayish-blue stone, and in one place a harder whitish calcareous stone is found. It is all very porous, but the latter is far the most solid and best.

Exactly what wharf or place the correspondent meant by the "yellow fever hospital wharf," I cannot divine, for there is not now, neither has there been in the memory of any one now living, any hospital specially and exclusively used for that disease. There is, however, a hospital near the wharf in which yellow fever is always to be found, and as the two hospitals that are near the wharves are on the Havana side of the harbor, it is probable that the wharf spoken of meant the wharves on the Havana side of the harbor.

All the wharves on the Havana side of the harbor are immediately contiguous to the town. They are made of wood, on thickly-driven wooden piles, and under them many of the sewers of the city empty. The almost tideless harbor affords no current sufficient for cleansing purposes, and the sewage is left to deposit and putrify just where it is emptied, viz., under the wharves. As a matter of fact, yellow fever occurs at these wharves many months in the year, and some seasons it has been known to invade vessels every month in the year.

Their locality must not only endanger the atmosphere of vessels lying at them, but whatever is taken aboard in their immediate precincts, whether it is sand, or earth, or porous-stone ballast, or cargo consisting of hides, &c.

These dangers of yellow-fever contamination from these sources have been for a long time recognized by your sanitary inspector, and to meet the emergency he always states in the bill of health which the vessel carries for the information of the health officers or boards of health at the port of destination, the fact whether the vessel has been at wharves or not, and if so, how long, as well as at what wharves.

The same information is given to the Supervising Surgeon-General of the Marine-Hospital Service.

In addition, the captain or those interested in the vessel are advised to disinfect or fumigate that ballast or that cargo so exposed as well as the vessel itself after all are out in the open bay.

It will thus be seen that the Surgeon-General of the Marine-Hospital Service is informed in regard to the sanitary status of the vessel and contents as near as may be, the health officers at the port of destination in the United States are also informed, and can take any advisable action to protect themselves against vessel and contents, and the captains are urged to do all possible to put their vessel, &c., in a good sanitary condition before leaving this port.

It has often occurred to me that the safest and better way would be never to discharge Havana ballast at or near any population south of the capes of Delaware.

I should have stated that quite a number of captains desire their vessels and cargoes or ballast disinfected and fumigated before they leave here, and when it is done it is noted in the bill of health, as well as what is done.

Very respectfully your obedient servant,

D. M. BURGESS,

Sanitary Inspector, Marine-Hospital Service.

To Surgeon-General HAMILTON.

Denmark.—The following is a translation of a quarantine order issued by the Danish Government, under date of December 17, 1888:

Notice having been received that small-pox has broken out in Porto Rico, the provisions in section 2, paragraph 1 of the law of July 2, 1880, providing against the introduction of contagious diseases into the kingdom are to be put in force, until further notice, with reference to ships coming from or having touched ports in Porto Rico, and in accordance with section 32 of the same law, the importation from said port into this kingdom of used linen, used articles of clothing, and used bed-clothes, providing the articles named do not constitute the personal effects of travelers, waste-cotton, or wool, refuse paper, hair and hides is prohibited.

There is no *quarantine* of ships at present. The provisions of section 2, paragraph 1, of the law of July 2, 1880, referring to precautionary measures against the introduction into the kingdom are hereafter to be enforced with reference to the following places:

Ports in Porto Rico; Marseilles; Sicilian ports; ports of the French coast between Nantes and St. Malo, both inclusive; Egernsund; all ports in Chili; all ports in Florida; all ports in Jamaica; all ports in Martinique; all ports in Guadeloupe; St. Iago de Cuba; ports in Tonkin and Cochin China, and in the East Indies, with the exception of the Dutch East Indian Colonies; Trieste; all ports in Egypt; ports on the Red Sea; Rio de Janeiro; and Havana.

The prohibition against the importation into the kingdom of used linen, used articles of clothing, and used bed-clothes, providing the above-named articles do not constitute the personal effects of travelers, waste-cotton or wool, refuse paper, hair and hides, remains in force in reference to the following places:

Ports in Porto Rico; Marseilles; Sicilian ports; ports of the French coast between Nantes and St. Malo, both inclusive; Egernsund; all ports in Florida; all ports in Jamaica; all ports in Martinique; all ports in Guadeloupe; St. Iago de Cuba; ports in Tonkin and Cochin China; and ports in the East Indies, with the exception of the Dutch East Indian Colonies; and all ports in Chili.

The prohibition against the importation into the kingdom of used linen, used articles of clothing, and used bed-clothes, providing the articles named do not constitute the personal effects of travelers, remains in force in reference to Rio de Janeiro and Havana. In addition thereto special attention is to be paid to the cleansing under official inspection of linen, clothing, and bed-clothes brought from either of the last two places as the personal effects of travelers.

This order to go into effect at once.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Dec. 28	2,260,945	982	.....	.....	3	.....	11	2	38	32	3
Glasgow	Dec. 22	545,678	229	.....	.....	.....	.....	2	4	4	.....	.....
Warsaw	Dec. 15	448,814	201	.....	.....	8	.....	.....	16	9	.....	.....
Calcutta	Nov. 24	433,219	315	59	.....	.....	.....	.....	.....	1	.....	.....
Rome	Nov. 10	393,496	183	.....	.....	1	.....	3	1	1	.....	.....
Rome	Nov. 17	393,491	171	.....	.....	1	.....	5	.....	2	.....	.....
Copenhagen	Dec. 11	300,000	113	.....	.....	.....	.....	1	4	7	.....	.....
Copenhagen	Dec. 18	300,000	105	.....	.....	.....	.....	1	2	3	.....	.....
Munich	Dec. 8	275,000	142	.....	.....	.....	.....	1	1	13	.....	.....
Munich	Dec. 15	275,000	164	.....	.....	.....	.....	.....	4	14	.....	.....
Palermo	Dec. 22	250,000	84	.....	.....	4	.....	.....	4	5	.....	.....
Genoa	Dec. 22	199,913	104	.....	.....	2	2	.....	.....	.....	.....	.....
Trieste	Dec. 15	154,500	63	.....	.....	3	.....	.....	.....	3	.....	.....
Stuttgart	Dec. 22	125,510	41	.....	.....	.....	.....	.....	.....	3	.....	.....
Bremen	Dec. 15	122,000	40	.....	.....	.....	.....	.....	2	.....	3	.....
Havre	Dec. 15	112,074	59	.....	.....	.....	.....	4	.....	1	.....	.....
Pernambuco	Dec. 4	110,000	90	.....	.....	.....	1	1	2	.....	.....	.....
Pernambuco	Dec. 14	110,000	82	.....	1	.....	1	2	1	.....	.....	.....
Pernambuco	Dec. 18	110,000	63	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barmen	Dec. 15	109,000	31	.....	.....	.....	.....	.....	.....	.....	.....	1
Leghorn	Dec. 25	102,540	54	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Nov. 24	65,802	31	.....	.....	.....	.....	.....	1	1	.....	.....
Mayence	Dec. 1	65,802	28	.....	.....	.....	.....	.....	.....	1	.....	.....
Mayence	Dec. 8	65,802	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Dec. 22	65,028	60	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Dec. 27	28,800	29	.....	.....	1	.....	.....	.....	.....	.....	.....
Kingston, Can	Jan. 4	17,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Dec. 14	17,000	46	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Colombia	Dec. 15	13,000	10	.....	.....	.....	.....	.....	.....	1	.....	.....
Laguayra	Dec. 8	7,428	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Dec. 15	7,428	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bluefields, Nic	Dec. 22	2,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bluefields, Nic	Dec. 29	2,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

Travel in Florida.—In the opinion of this Bureau, travel may safely be resumed throughout the State. An inspection service will be maintained, and in case of any appearance of fever, the public will be notified.

Gainesville, Fla.—Yellow Fever.—The following letter has been received:

GAINESVILLE, FLA., *January* 3, 1889.

That you may have all necessary information relative to the health of Gainesville, Fla., since Dr. Martin concluded his labors here, I will report that during the month of December and up to this time there has been only one case of yellow fever. This case occurred just outside the corporate limits in the person of a Mr. York, a carpenter, who had worked, however, daily in the city. He was taken on the 18th (December), and died on the 22d. His case was typical, unmistakable. The two succeeding nights after he was taken were quite cold, ice forming each night, and no other cases have occurred. I feel confident that there will be no other cases now. The same precautions were taken

relative to this case that were taken during the existence of the epidemic—bedding burned, house fumigated, family isolated, &c.

Yours very truly,

N. D. PHILLIPS, M. D.

To Surgeon-General HAMILTON.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y	Jan. 5	1,549,300	785	.....	.....	.....	.....	.....	.....	9	47	43	25	14
Philadelphia, Pa	Dec. 29	1,016,758	349	.....	.....	.....	.....	.....	.....	10	8	7	.....	2
Brooklyn, N. Y	Dec. 29	805,885	341	.....	.....	.....	.....	.....	.....	4	12	23	6	7
Baltimore, Md	Jan. 5	500,343	164	.....	.....	.....	.....	.....	.....	5	.....	6	.....	3
St. Louis, Mo	Dec. 29	440,000	156	.....	.....	.....	.....	.....	.....	3	.....	16	.....	.....
San Francisco, Cal	Dec. 28	330,000	102	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Cincinnati, Ohio	Jan. 5	255,139	124	.....	.....	.....	.....	.....	.....	.....	3	7	.....	.....
New Orleans, La	Dec. 29	248,000	117	.....	.....	.....	.....	.....	.....	3	.....	5	1	.....
Milwaukee, Wis	Jan. 5	200,000	66	.....	.....	.....	.....	.....	.....	1	3	5	.....	.....
Kansas City, Mo	Jan. 5	180,000	30	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Minneapolis, Minn	Dec. 29	180,000	43	.....	.....	.....	.....	.....	.....	2	2	6	.....	.....
Newark, N. J	Jan. 1	179,000	76	.....	.....	.....	.....	.....	.....	6	.....	1	.....	.....
Newark, N. J	Jan. 8	179,000	94	.....	.....	.....	.....	.....	.....	9	2	2	.....	.....
Detroit, Mich	Jan. 5	.....	59	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Richmond, Va	Dec. 31	100,000	38	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Richmond, Va	Jan. 7	100,000	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Denver, Colo	Jan. 4	96,000	33	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Toledo, Ohio	Jan. 4	80,000	23	.....	.....	.....	.....	.....	.....	.....	1	3	.....	.....
Camden, N. J	Jan. 3	70,000	9	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....
Nashville, Tenn	Jan. 5	65,153	24	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....
Fall River, Mass	Jan. 5	65,000	32	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....
Charleston, S. C	Jan. 5	60,145	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynn, Mass	Jan. 5	50,000	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Manchester, N. H	Dec. 30	41,000	19	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Galveston, Tex	Dec. 28	40,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me	Jan. 4	40,000	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	Jan. 5	40,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Saginaw, Mich	Jan. 5	33,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	Dec. 29	30,000	10	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Auburn, N. Y	Jan. 5	26,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass	Jan. 5	25,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Newport, R. I	Jan. 3	22,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass	Jan. 5	21,105	6	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Ia	Jan. 5	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 3. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., January 18, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended January* 18, 1889, *and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended December 29, corresponded to an annual rate of 20.8 a thousand of the aggregate population, which is estimated at 9,398,273. The lowest rate was recorded in Bristol and Hull, viz., 12.9, and the highest in Cardiff, viz., 30.8 a thousand. Diphtheria caused 9 deaths in Manchester, 3 in Salford, 3 in Preston, and 3 in Liverpool. Small-pox caused 1 death in Bradford.

London.—One thousand six hundred and forty-one deaths were registered during the week, including measles, 147; scarlet fever, 20; diphtheria, 34; whooping-cough, 28; enteric fever, 8; diarrhœa and dysentery, 14. The deaths from all causes corresponded to an annual rate of 20.0 a thousand. Diseases of the respiratory organs caused 412 deaths; different forms of violence, 52; and 4 cases of suicide were registered. In greater London 2,053 deaths were registered, corresponding to an annual rate of 19.4 a thousand of the population. In the "outer ring" the deaths included measles, 17; whooping-cough, 1, and fever, 2.

Ireland.—The average annual death rate represented by the deaths registered during the week ended December 29 in the 16 principal town districts of Ireland was 21.1 a thousand of the population. The lowest rate was recorded in Wexford, viz., 4.3, and the highest in Belfast, viz., 28.0 a thousand. In Dublin 144 deaths were registered, including whooping-cough, 4; enteric fever, 5; scarlet fever, 2; and diarrhœa, 2.

Scotland.—The deaths registered in 8 principal towns during the week ended December 29, corresponded to an annual rate of 20.3 a thousand of

the population, which is estimated at 1,314,274. The lowest mortality was recorded in Aberdeen, viz., 13.9, and the highest in Glasgow, viz., 24.6 a thousand. The aggregate number of deaths registered from all causes was 512, including measles, 13; scarlet fever, 10; diphtheria, 16; whooping-cough, 9; fever, 7, and diarrhœa, 5.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Calcutta	Dec. 1	433,219	289	43	.....	1	.....	.....	.....	1	.....	.....
Amsterdam	Dec. 22	389,916	191	.....	.....	.....	.....	.....	1	4	.....	.....
Rio de Janerio	Dec. 9	350,000	247	.....	10	3	.....	4	.....	.....	.....	.....
Edinburgh	Dec. 1	262,733	82	.....	.....	.....	.....	3	1	1	.....	.....
Edinburgh	Dec. 8	262,733	79	.....	.....	.....	.....	.....	.....	1	.....	.....
Palermo	Dec. 29	250,000	68	.....	.....	2	.....	.....	3	4	.....	.....
Genoa	Dec. 29	179,890	117	.....	.....	.....	.....	.....	.....	3	.....	.....
Toronto	Dec. 29	160,000	15	.....	.....	.....	.....	.....	.....	1	.....	.....
Toronto	Jan. 5	160,000	13	.....	.....	.....	.....	2	.....	.....	.....	.....
Stuttgart	Dec. 29	125,510	45	.....	.....	.....	.....	.....	.....	2	.....	.....
Bremen	Dec. 22	122,000	43	.....	.....	.....	.....	.....	1	1	.....	.....
Havre	Dec. 29	112,074	65	.....	.....	1	.....	4	.....	.....	.....	.....
Barmen	Dec. 22	109,000	33	.....	.....	.....	.....	.....	.....	1	.....	.....
Leghorn	Dec. 30	102,540	51	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	Dec. 1	74,320	18	.....	.....	.....	.....	.....	.....	2	.....	.....
Leith	Dec. 8	74,320	22	.....	.....	.....	.....	.....	.....	.....	.....	.....
Callao	Dec. 15	34,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Dec. 11	30,000	85	.....	3	.....	.....	.....	.....	.....	36	.....
Gibraltar	Dec. 23	23,581	9	.....	.....	.....	.....	1	.....	.....	.....	.....
Antigua	Dec. 30	15,847	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Dec. 22	7,428	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Dec. 29	7,428	4	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

Brooklyn, N. Y.—Eighteen thousand and sixty-one deaths were registered during the year ending December 31, 1888. There were 373 cases and 13 deaths from small-pox; 463 cases and 153 deaths from enteric fever; 2,880 cases and 475 deaths from scarlet fever; 2,540 cases and 984 deaths from diphtheria; 951 cases and 59 deaths from measles; and 194 deaths from whooping-cough. The number of cases of whooping-cough was not reported. There were 2,056 deaths from phthisis; 1,663 from rheumatism, and 1,124 from cholera infantum.

Galveston, Tex.—Assistant Surgeon W. J. Pettus, Marine-Hospital Service, reports, under date of January 15, one case of small-pox in the city.

Denver, Colo.—The health commissioner, under date of January 11, states that a case of small-pox was reported on the 1st instant. The patient was removed to the small-pox hospital and died on the 5th instant.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Jan. 12	1,550,372	739	.....	.....	.....	.....	.....	.....	4	49	54	24	9
Philadelphia, Pa.	Jan. 5	1,040,245	366	.....	.....	.....	.....	.....	.....	10	14	4	.....	2
Brooklyn, N. Y.	Jan. 5	814,505	345	.....	.....	.....	.....	.....	.....	3	9	25	5	9
Brooklyn, N. Y.	Jan. 12	814,505	344	.....	.....	.....	.....	.....	.....	1	9	29	5	4
Baltimore, Md.	Jan. 12	500,343	149	.....	.....	.....	.....	.....	.....	2	1	3	.....	2
St. Louis, Mo.	Jan. 5	440,000	150	.....	.....	.....	.....	.....	.....	.....	3	10	.....	.....
San Francisco, Cal.	Jan. 4	330,000	108	.....	.....	1	.....	.....	.....	4	.....	2	.....	1
Cincinnati, Ohio.	Jan. 12	255,139	99	.....	.....	.....	.....	.....	.....	2	.....	7	.....	.....
New Orleans, La.	Jan. 5	248,000	105	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....
Cleveland, Ohio.	Dec. 15	227,861	68	.....	.....	.....	.....	.....	.....	2	.....	5	.....	.....
Pittsburgh, Pa.	Jan. 5	220,000	90	.....	.....	.....	.....	.....	.....	6	2	1	1	1
Pittsburgh, Pa.	Jan. 12	220,000	104	.....	.....	.....	.....	.....	.....	3	.....	4	.....	1
Milwaukee, Wis.	Jan. 12	200,000	70	.....	.....	.....	.....	.....	.....	1	4	4	.....	.....
Louisville, Ky.	Jan. 12	200,000	57	.....	.....	.....	.....	.....	.....	3	.....	2	.....	.....
Minneapolis, Minn.	Jan. 5	180,000	37	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....
Minneapolis, Minn.	Jan. 12	180,000	45	.....	.....	.....	.....	.....	.....	2	3	4	.....	.....
Kansas City, Mo.	Jan. 12	180,000	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newark, N. J.	Jan. 15	179,000	75	.....	.....	.....	.....	.....	.....	3	.....	3	.....	.....
St. Paul, Minn.	Jan. 7	175,000	31	.....	.....	.....	.....	.....	.....	1	1	2	.....	.....
St. Paul, Minn.	Jan. 12	175,000	63	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Rochester, N. Y.	Jan. 5	120,000	26	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Rochester, N. Y.	Jan. 12	120,000	39	.....	.....	.....	.....	.....	.....	1	.....	4	.....	1
Richmond, Va.	Jan. 12	100,000	37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Denver, Colo.	Jan. 11	96,000	46	.....	.....	1	.....	.....	.....	1	1	2	.....	.....
Toledo, Ohio	Jan. 11	80,000	22	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Camden, N. J.	Jan. 3	70,000	21	.....	.....	.....	.....	.....	.....	2	2	.....	.....	.....
Nashville, Tenn	Jan. 12	65,153	20	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Fall River, Mass.	Jan. 12	65,000	30	.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....
Charleston, S. C.	Jan. 12	60,145	27	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Lynn, Mass	Jan. 12	50,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Jan. 5	42,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Jan. 4	40,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Jan. 12	40,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa.	Jan. 5	33,715	8	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
Davenport, Iowa.	Jan. 12	33,715	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
East Saginaw, Mich.	Jan. 12	33,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Burlington, Iowa	Jan. 4	30,166	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Altoona, Pa.	Jan. 5	30,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	Jan. 12	30,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Jan. 12	26,000	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Haverhill, Mass.	Jan. 12	25,000	5	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Newport, R. I.	Jan. 10	22,000	7	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Keokuk, Ia.	Jan. 12	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Jan. 5	15,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Jan. 12	15,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 4. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., January 25, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended January 25, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended January 5, corresponded to an annual rate of 22.7 a thousand of the aggregate population, which is estimated at 9,398,273. The lowest rate was recorded in Brighton 12.9, and the highest in Blackburn, viz., 39.2 a thousand. Diphtheria caused 4 deaths in Manchester, 4 in Salford, and 2 in Nottingham.

London.—One thousand seven hundred and eighty-four deaths were registered during the week, including measles, 143; scarlet fever, 12; diphtheria, 33; whooping-cough, 32; enteric fever, 14; diarrhœa and dysentery, 11. The deaths from all causes corresponded to an annual rate of 21.4 a thousand. Diseases of the respiratory organs caused 484 deaths; different forms of violence, 61. In greater London 2,224 deaths were registered, corresponding to an annual rate of 20.6 a thousand of the population. In the "outer ring" the deaths included measles, 18; whooping-cough, 6; diphtheria, 7, and scarlet fever, 8.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended January 5, in the 16 principal town districts of Ireland, was 26.6 a thousand of the population. The lowest rate was recorded in Kilkenny, viz., 0.0, and the highest in Armagh, viz., 46.5 a thousand. In Dublin 212 deaths were registered, including whooping-cough, 5; enteric fever, 5; scarlet fever, 1; and measles, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended January 5, corresponded to an annual rate of 23.6 a thousand of

the population, which is estimated at 1,314,274. The lowest mortality was recorded in Edinburgh, viz., 16.8, and the highest in Paisley, viz., 35.7 a thousand. The aggregate number of deaths registered from all causes was 604, including small-pox, 1; measles, 13; scarlet fever, 2; diphtheria, 6; whooping-cough, 16; fever, 5, and diarrhœa, 7.

Trieste, Austria.—There were 15 cases and 6 deaths from small-pox during the month of December, 1888.

Catania, Italy.—Two hundred and forty-seven deaths were registered during the month of December, 1888, including 61 from small-pox.

Acapulco, Mexico.—Two hundred and twenty-seven deaths were registered during the year ended December 31, 1888, including enteric fever, 7; small-pox, 3; dysentery, 23; diphtheria, 1.

Havana, Cuba.—Seven deaths from yellow fever were registered during the week ended January 12, 1889.

Cardenas, Cuba.—No new cases of small-pox have occurred during the week ended January 11. The health of town and harbor is good.

Santiago de Cuba.—The United States Consul, under date of January 9, states that "the health of the city has been remarkably good during the last two weeks of December. * * * Yellow fever has entirely disappeared. The six cases recorded were in the military hospital, which has, as before stated, no communication with the town or port. In view of these facts, I issue clean bills of health to vessels leaving with all well on board for the United States."

Guaymas, Mexico.—The United States Consul states, under date of December 31, 1888, that "no particular or epidemical sickness prevails in this consular district. Sanitary condition good." Total number of deaths in December, 11.

Bordeaux, France.—Five hundred and eight deaths were registered during the month of December, 1888, including enteric fever, 13; scarlet fever, 3; and diphtheria and croup, 12.

Nassau, N. P.—January 9, no prevailing diseases of importance. City healthy.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Dec. 29	2,260,945	1,033	.....	.....	6	.....	21	4	42	42	2
Paris	Jan. 5	2,260,945	973	.....	.....	3	.....	5	4	40	43	3
Glasgow	Dec. 29	545,678	249	.....	.....	.....	.....	3	5	8	.....	.....
Glasgow	Jan. 8	545,678	288	.....	.....	.....	.....	3	1	4	.....	.....
Warsaw	Dec. 31	444,814	29	.....	.....	8	.....	.....	8	13	.....	.....
Warsaw	Jan. 7	444,814	227	.....	.....	12	.....	.....	10	12	.....	.....
Calcutta	Dec. 8	433,219	259	28	.....	.....	.....	.....	.....	.....	.....	.....
Amsterdam	Jan. 5	399,051	180	.....	.....	.....	.....	.....	.....	3	.....	.....
Copenhagen	Dec. 29	300,000	135	.....	.....	.....	.....	.....	6	4	.....	.....
Munich	Dec. 22	275,000	147	.....	.....	.....	.....	.....	7	7	.....	.....
Palermo	Jan. 5	250,000	108	.....	.....	1	.....	.....	1	9	.....	.....
Bristol	Jan. 5	229,361	91	.....	.....	.....	.....	1	1	.....	.....	.....
Genoa	Jan. 5	179,894	99	.....	.....	2	2	.....	.....	2	.....	.....
Toronto	Jan. 12	160,000	25	.....	.....	.....	.....	1	.....	3	.....	.....
Trieste	Dec. 29	154,500	87	.....	.....	6	.....	.....	.....	3	.....	.....
Stuttgart	Jan. 5	125,510	45	.....	.....	.....	.....	.....	.....	1	.....	.....
Barmen	Dec. 29	109,000	50	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leghorn	Jan. 6	102,540	35	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Dec. 29	65,028	51	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Jan. 11	17,300	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	Dec. 29	16,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bluefields, Nic	Jan. 5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Dec. 10	1,004	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

New York.—Yellow fever on United States Steamer Yantic.—The following letter has been received:

HEALTH OFFICER'S DEPARTMENT,
STATE OF NEW YORK,
Quarantine, Staten Island, January 16, 1889.

The United States Steamer Yantic arrived at quarantine at 10.30 p. m. of the 10th instant from Port au Prince, Hayti.

According to the report of surgeon McCarty, yellow fever developed on board the Yantic the 28th of December, while lying at Port au Prince. Lieut. Charles R. Miles was the first victim. The 29th the second case, in the person of H. L. Kellar, developed; the third case, Cadet M. L. Bristol occurred on the 30th, and on the 31st ultimo, Corporal Chas. Wm. Rowe was taken sick, and died on the 7th instant.

January 1 the vessel left Port au Prince. On arrival at quarantine the first three cases that had developed were still sick. The second and third cases in the order of the date of development were doing well. The first case was critically ill, and gradually sank until death ensued at 10 p. m. of the 14th instant. The two remaining cases are convalescent.

The Yantic has been undergoing a thorough system of disinfection in every part not occupied by the sick. The case of lieutenant Miles, who died the 14th, was so serious that I did not think it proper to expose him to the peril of removal to the yellow fever hospital. The course of disinfection will be continued until there is no danger of infection from anything on board of the vessel.

The case of Lieutenant Miles was unusually protracted. There were complications in his case that resisted all efforts of control—hemorrhage from the kidneys constituted the most serious of these.

A careful study of the history of the development of yellow fever on the Boston and Yantic, leads to the conclusion that the source of the infection in each instance was in the boats of the natives known as "bumboats," in which fruit was brought alongside the steamers. My reason for this conclusion will be more fully given in my report soon to be made.

Very respectfully,

WM. A. SMITH,
Health Officer.

To Surgeon-General HAMILTON.

Denver, Col.—Small-pox.—The following telegram has been received from Dr. Wm. Robertson, health commissioner:

"January 18: Have no epidemic nor fear of any. Have had in hospital, eight miles out, twenty-five cases, and four light cases in town under guard. Jurisdiction of board extends five miles beyond city limits.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Philadelphia, Pa	Jan. 12	1,040,245	380	.....	.....	.....	.....	.....	.....	10	9	2	.....	1
Chicago, Ill	Jan. 19	830,000	.....	.....	.....	.....	.....	.....	.....	5	2	17	5	.....
Brooklyn, N. Y	Jan. 19	814,505	358	.....	.....	.....	.....	.....	.....	2	10	27	5	10
Baltimore, Md	Jan. 19	500,343	142	.....	.....	.....	.....	.....	.....	3	1	3	.....	5
Saint Louis, Mo	Jan. 12	440,000	164	.....	.....	.....	.....	.....	.....	1	1	10	1	3
San Francisco, Cal	Jan. 11	330,000	148	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
New Orleans, La	Jan. 12	248,000	110	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Cleveland, Ohio	Dec. 29	227,861	70	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Milwaukee, Wis	Jan. 19	200,000	60	.....	.....	.....	.....	.....	.....	1	6	3	.....	1
Minneapolis, Minn	Jan. 19	180,000	52	.....	.....	.....	.....	.....	.....	2	.....	6	.....	.....
Kansas City, Mo	Jan. 19	180,000	38	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Pittsburgh, Pa	Jan. 19	.....	68	.....	.....	.....	.....	.....	.....	3	1	3	.....	1
Denver, Colo	Jan. 18	96,000	32	.....	.....	.....	.....	.....	.....	2	.....	3	.....	.....
Camden, N. J	Jan. 10	70,000	31	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Charleston, S. C	Jan. 19	60,145	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynn, Mass	Jan. 19	50,000	12	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Manchester, N. H	Jan. 12	42,000	14	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Portland, Me	Jan. 19	40,000	12	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Davenport, Iowa	Jan. 19	33,715	8	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
East Saginaw, Mich	Jan. 19	33,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Burlington, Iowa	Jan. 11	30,166	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	Jan. 19	30,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y	Jan. 19	26,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I	Jan. 17	22,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass	Jan. 19	21,105	4	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Keokuk, Iowa	Jan. 20	16,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,
Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 5. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., February 1, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended February* 1, 1889, *and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended January 12, corresponded to an annual rate of 25.5 a thousand of the aggregate population, which is estimated at 9,398,273. The lowest rate was recorded in Brighton, 16.7, and the highest in Preston, viz., 30.5 a thousand. Diphtheria caused 7 deaths in Manchester, and 3 in Salford.

London.—Two thousand and seventy-five deaths were registered during the week, including measles, 176; scarlet fever, 17; diphtheria, 21; whooping-cough, 37; enteric fever, 10; diarrhœa and dysentery, 12; choleraic diarrhœa, 1. The deaths from all causes corresponded to an annual rate of 24.9 a thousand. Diseases of the respiratory organs caused 652 deaths. In greater London 2,483 deaths were registered, corresponding to an annual rate of 23.0 a thousand of the population. In the "outer ring" the deaths included measles, 22.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended January 12, in the 16 principal town districts of Ireland, was 30.0 a thousand of the population. The lowest rate was recorded in Sligo, viz., 4.8, and the highest in Limerick, viz., 44.5 a thousand. In Dublin 204 deaths were registered, including whooping-cough, 3; enteric fever, 2; scarlet fever, 3; measles, 3; typhus, 1; and diarrhoea, 3.

Scotland.—The deaths registered in 8 principal towns during the week ended January 12, corresponded to an annual rate of 24.1 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Leith, viz., 12.9, and the highest in Glasgow, viz., 28.9 a thousand. The aggregate number of deaths registered from all

causes was 617, including small-pox, 1; measles, 17; scarlet fever, 6; diphtheria, 11; whooping-cough, 15; fever, 5, and diarrhœa, 10.

Trapani, Italy.—The United States consular agent reports, under date of December 31, 1888, that small-pox is decreasing. There were 38 deaths from that disease during the month, all of them persons not vaccinated.

Palermo, Italy.—The United States consul reports 8 deaths from small-pox during the month of December, 1888.

Marseilles, France.—The United States consul reports 827 deaths registered during the month of December, 1888, including small-pox, 9; enteric fever, 32; diptheria, 37; measles, 13; whooping-cough, 5; diarrhoea enteritis, 51. The health of the city is normal. The few deaths reported from small-pox are not above the usual average for December, and the disease has not assumed an epidemic form.

Havana, Cuba.—Eight deaths from yellow fever were registered during the week ended January 18, and the same number during the week ended January 25, 1889.

Nassau, N. P.—January 19, 1889: "City very healthy."

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Jan. 12	2,260,945	1,114	.....	.....	2	.....	19	3	41	53	3
Glasgow	Jan. 12	545,678	294	.....	.....	.....	.....	2	6	3	.....	12
Warsaw	Jan. 5	444,814	247	.....	.....	8	.....	.....	3	11	.....	.....
Calcutta	Dec. 15	433,219	249	12	.....	.....	.....	.....	.....	.....	.....	.....
Amsterdam	Jan. 12	399,051	201	.....	.....	.....	.....	1	1	9	.....	.....
Rome	Nov. 24	393,496	162	.....	.....	1	.....	2	1	2	.....	.....
Rome	Dec. 1	393,496	184	.....	.....	.....	.....	6	1	3	.....	.....
Edinburgh	Dec. 29	262,733	82	.....	.....	.....	.....	.....	1	1	.....	1
Palermo	Jan. 12	250,000	97	.....	.....	.....	.....	.....	.....	1	.....	.....
Genoa	Jan. 12	179,906	110	.....	.....	1	1	.....	.....	1	.....	.....
Toronto	Jan. 19	170,000	14	.....	.....	.....	.....	.....	.....	2	.....	.....
Trieste	Jan. 5	154,500	89	.....	.....	4	.....	.....	.....	.....	.....	.....
Stuttgart	Jan. 12	125,510	44	.....	.....	.....	.....	.....	.....	1	.....	.....
Havre	Jan. 12	112,074	62	.....	.....	1	.....	1	.....	.....	.....	.....
Barmen	Jan. 5	109,000	45	.....	.....	.....	1	.....	.....	.....	.....	2
Leghorn	Jan. 13	102,540	47	.....	.....	.....	.....	1	.....	.....	.....	.....
Leith	Dec. 22	74,320	16	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	Dec. 29	74,320	20	.....	.....	.....	.....	.....	.....	3	.....	.....
Mayence	Dec. 15	65,802	30	.....	.....	.....	.....	.....	1	2	.....	.....
Mayence	Dec. 22	65,802	20	.....	.....	.....	.....	.....	1	.....	.....	.....
Cadiz	Jan. 5	65,028	51	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Jan. 12	65,028	52	.....	.....	.....	.....	.....	.....	.....	.....	.....
Callao	Dec. 29	34,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Jan. 6	23,581	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Jan. 18	17,300	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Jan. 5	7,428	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Jan. 12	7,428	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bluefields, Nic	Jan. 12	2,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

Denver, Colo.—Small-pox.—Dr. W. M. Robertson, health commissioner, writes as follows, under date of January 18:

Your telegram asking full particulars about small-pox epidemic was received to-day and answered. * * * It was brought here early in December by some gamblers who came from Kansas City and stopped in a lodging house near where there was a faro bank, but we at once took possession of the house, removed the inmates, and had the house fumigated and then thoroughly renovated by whitewashing walls and then kalsomining. We have had no cases from there since. We have taken into our hospital cases from Deer Trail, a small town 40 miles from here on the Kansas Pacific Railroad, besides some from others and the country surrounding the city. We have taken good advantage of the scare by having all children, who heretofore have not been, vaccinated now. This, we are sorry to say, we find has, in a great many cases, been neglected. We have no fear of an epidemic, nor have we had one, nor are we now having one. Nearly all cases to date have occurred down in the lower part of the city among the cheap and crowded lodging houses, but in every case we have taken hold of the room or house, and, by having it thoroughly fumigated and renovated, have kept the disease in check, and are in a fair way to have none on our hands in a few days. * * * As my telegram has stated, we have had 25 cases that belonged to Denver, and have 4 light cases in town now under quarantine and guard. We have had others that belong to other towns and the county.

To Surgeon-General HAMILTON.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Jan. 19	1,551,244	779	.....	.....	.....	.....	.....	.....	4	54	50	31	9
New York, N. Y.	Jan. 26	1,552,116	708	.....	.....	.....	.....	.....	.....	9	55	40	22	12
Philadelphia, Pa.	Jan. 19	1,040,245	382	.....	.....	.....	.....	.....	.....	8	14	11	.....	2
Philadelphia, Pa.	Jan. 26	1,040,245	355	.....	.....	.....	.....	.....	.....	10	9	12	.....	4
Brooklyn, N. Y.	Jan. 26	814,505	360	.....	.....	.....	.....	.....	.....	1	11	33	14	6
Baltimore, Md.	Jan. 26	500,343	157	.....	.....	.....	.....	.....	.....	5	2	2	.....	.....
Saint Louis, Mo.	Jan. 19	440,000	162	.....	.....	.....	.....	.....	.....	4	2	10	3	4
Saint Louis, Mo.	Jan. 26	440,000	163	.....	.....	.....	.....	.....	.....	3	2	7	4	.....
San Francisco, Cal.	Jan. 18	330,000	116	.....	.....	1	.....	.....	.....	.....	.....	1	.....	2
Cincinnati, Ohio	Jan. 19	255,139	102	.....	.....	.....	.....	.....	.....	.....	2	7	.....	1
Cincinnati, Ohio	Jan. 26	255,139	101	.....	.....	.....	.....	.....	.....	7	1	6	.....	.....
Cleveland, Ohio	Jan. 5	235,000	73	.....	.....	.....	.....	.....	.....	8	.....	4	.....	.....
Cleveland, Ohio	Jan. 12	235,000	54	.....	.....	.....	.....	.....	.....	5	.....	2	.....	.....
Detroit, Mich.	Jan. 19	230,000	57	.....	.....	.....	.....	.....	.....	.....	1	4	.....	1
Detroit, Mich.	Jan. 26	230,000	60	.....	.....	.....	.....	.....	.....	2	1	2	.....	.....
Pittsburgh, Pa.	Jan. 26	.....	.....	.....	.....	.....	.....	.....	.....	1	3	3	.....	1
Milwaukee, Wis.	Jan. 26	200,000	64	.....	.....	.....	.....	.....	.....	1	4	2	.....	.....
Minneapolis, Minn.	Jan. 26	180,000	37	.....	.....	.....	.....	.....	.....	3	1	3	1	.....
Kansas City, Mo.	Jan. 26	180,000	34	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....
Newark, N. J.	Jan. 22	179,000	72	.....	.....	.....	.....	.....	5	5	1	8	.....	.....
Saint Paul, Minn.	Jan. 14	175,000	35	.....	.....	.....	.....	.....	.....	3	.....	3	1	.....
Providence, R. I.	Jan. 19	123,000	47	.....	.....	.....	.....	.....	.....	2	.....	2	.....	1
Providence, R. I.	Jan. 26	123,000	48	.....	.....	.....	.....	.....	.....	2	2	2	.....	1
Rochester, N. Y.	Jan. 19	120,000	37	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	1
Rochester, N. Y.	Jan. 26	120,000	43	.....	.....	.....	.....	.....	.....	.....	.....	7	1	2
Richmond, Va.	Jan. 21	100,005	34	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Denver, Colo.	Jan. 25	96,000	36	.....	.....	1	.....	.....	.....	1	.....	1	.....	.....
Toledo, Ohio	Jan. 18	80,000	22	.....	.....	.....	.....	.....	.....	1	1	4	.....	.....
Toledo, Ohio	Jan. 26	80,000	27	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Camden, N. J.	Jan. 17	70,000	16	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Nashville, Tenn.	Jan. 19	65,153	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn.	Jan. 26	65,153	17	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Fall River, Mass.	Jan. 19	65,000	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	Jan. 26	65,000	30	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....
Charleston, S. C.	Jan. 26	60,145	29	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Lynn, Mass	Jan. 26	50,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Manchester, N. H.	Jan. 19	42,000	16	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Erie, Pa.	Jan. 26	42,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Jan. 26	40,000	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Jan. 11	40,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	Jan. 26	33,715	7	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
East Saginaw, Mich.	Jan. 26	33,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Jan. 26	26,000	11	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Haverhill, Mass.	Jan. 19	25,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Jan. 26	25,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Jan. 24	22,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Jan. 26	21,105	9	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....
Keokuk, Iowa	Jan. 26	16,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Jan. 19	15,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Jan. 26	15,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 6. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., February 8, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended February* 8, 1889, *and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended January 19, corresponded to an annual rate of 21.9 a thousand of the aggregate population, which is estimated at 9,398,273. The lowest rate was recorded in Hull, 11.5, and the highest in Blackburn, viz., 34.9 a thousand. Diphtheria caused 4 deaths in Manchester, 2 in Salford, 3 in Liverpool, 2 in Oldham, and 2 in Portsmouth.

London.—One thousand seven hundred and sixty-nine deaths were registered during the week, including measles, 121; scarlet fever, 19; diphtheria, 38; whooping-cough, 36; enteric fever, 7; diarrhœa and dysentery, 11. The deaths from all causes corresponded to an annual rate of 24.9 a thousand. Diseases of the respiratory organs caused 492 deaths. Different forms of violence, 63; and 8 suicides were registered. In greater London 2,172 deaths were registered, corresponding to an annual rate of 20.1 a thousand of the population. In the "outer ring" the deaths included measles, 9; diphtheria, 4; and whooping-cough, 4.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended January 19, in the 16 principal town districts of Ireland, was 30.3 a thousand of the population. The lowest rate was recorded in Sligo, viz., 4.8, and the highest in Dundalk, viz., 43.6 a thousand. In Dublin 213 deaths were registered, including whooping-cough, 3; enteric fever, 3; scarlet fever, 3; and diarrhœa, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended January 12, corresponded to an annual rate of 22.0 a thousand of the population, which is estimated at 1,314,274. The lowest mortality

was recorded in Leith, viz., 13.6, and the highest in Paisley, viz., 30.8 a thousand. The aggregate number of deaths registered from all causes was 563, including small-pox, 1; measles, 14; scarlet fever, 4; diphtheria, 10; whooping-cough, 16; fever, 7, and diarrhœa, 12.

Netherlands.—The deaths registered in the principle cities of the Netherlands, having an aggregate population of 1,129,678 during the month of November, 1888, corresponded to an annual rate of 20.6 a thousand. The lowest rate was recorded in Leeuwarden, viz: 16.2, and the highest in Hertogenbosch, viz: 27.1 a thousand. The deaths included enteric fever, 14; scarlet fever, 2; measles, 30; whooping cough, 28; diarrhœa and dysentery, 20; and cholera nostras, 1.

Havana, Cuba.—The United States sanitary inspector reports as follows:

HAVANA, ISLAND OF CUBA, *February* 2, 1889.

I have the honor to inform you that there were 511 deaths in this city during the month of January.

Thirty-four of those deaths were caused by yellow fever; 21 by so-called pernicious fever; 1 by paludal fever; 8 by typhoid fever; 1 by diphtheria; 2 by croup; and 1 by glanders.

Four of the decedents by yellow fever occurred in the military hospital, while the remaining 30 were among civilians from portions of the city known to be in bad sanitary condition, and where the infectious cause of the disease usually exists in greater or less intensity.

It is quite a number of years since there has been so large a number of deaths (34) from yellow fever in the month of January. In the corresponding month of last year (1888), there were only 9 deaths, while during the same period in 1887 there were only 6 deaths, in 1886, 4, in 1885, 6, while during the month of January, 1884, there were 30 deaths from that disease.

Doubtless the unusually warm weather during the month referred to of this year has been an important factor in keeping the number of cases so large.

Among its victims was the private secretary of the civil governor, who died on January 29, five days ago.

Small-pox continues at places in the interior of the island, as at Jovellanos and Guines, and at the seaports of Cardenas and Matanzas.

Very respectfully your obedient servant,

D. M. BURGESS,
Sanitary Inspector Marine-Hospital Service.

To Surgeon-General HAMILTON.

Eleven deaths from yellow fever were recorded at Havana during the week ended February 2, 1889.

Matanzas, Cuba.—The United States consul reports, under date of January, 29, 1889, that "small-pox exists in the suburbs of this city, and I am informed the disease is spreading. There are no cases in the harbor."

Cardenas, Cuba.—The United States consul reports, under date of January 25, 1889, "no increase in small-pox. Weather warm and muggy."

Barbadoes, West Indies.—The United States consul, under date of January 12, 1889, states that "the health of the island is good. No system of registration. Particulars unobtainable."

Maceio, Brazil.—Thirty-eight deaths were registered during the month of December, 1888, including 8 from small-pox.

Bahia, Brazil, January 5, 1889.—Good health prevails throughout the city.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Jan. 19	2,260,945	1,527	.....	.....	2	.....	15	.....	37	50	5
Glasgow	Jan. 19	545,678	271	.....	.....	.....	.....	2	4	6	.....	.....
Warsaw	Jan. 12	444,814	261	.....	.....	15	.....	10	.....	9	.....	.....
Amsterdam	Jan. 19	390,016	202	.....	.....	.....	.....	.....	.....	3	.....	.....
Copenhagen	Jan. 5	300,000	113	.....	.....	.....	.....	.....	1	4	.....	.....
Copenhagen	Jan. 15	300,000	107	.....	.....	.....	.....	.....	.....	4	.....	.....
Rio de Janerio	Dec. 30	300,000	322	.....	29	.....	1	5	.....	1	.....	.....
Rio de Janeiro	Jan. 6	300,000	283	.....	35	5	4	3	.....	1	.....	.....
Munich	Jan. 5	281,000	165	.....	.....	.....	.....	.....	3	8	.....	.....
Munich	Jan. 12	281,000	135	.....	.....	.....	.....	.....	4	12	.....	.....
Belfast	Jan. 19	229,622	138	.....	.....	.....	1	1	.....	1	.....	.....
Genoa	Jan. 19	179,906	110	.....	.....	.....	3	.....	.....	.....	.....	.....
Toronto	Jan. 26	170,000	14	.....	.....	.....	.....	.....	.....	1	.....	.....
Trieste	Jan. 12	154,500	95	.....	.....	1	.....	1	.....	2	.....	.....
Stuttgart	Jan. 19	125,510	47	.....	.....	.....	.....	.....	.....	1	.....	.....
Havre	Jan. 19	112,074	52	.....	.....	1	.....	3	.....	1	.....	.....
Pernambuco	Jan. 1	110,000	72	.....	.....	.....	.....	1	.....	.....	.....	.....
Pernambuco	Jan. 8	110,000	69	.....	.....	.....	.....	2	1	.....	.....	.....
Barmen	Jan. 12	109,000	34	.....	.....	.....	.....	.....	.....	.....	.....	1
Leghorn	Jan. 20	102,340	44	.....	.....	.....	.....	2	.....	.....	.....	.....
Mayence	Jan. 5	65,802	14	.....	.....	.....	.....	1	.....	1	.....	.....
Mayence	Jan. 12	65,802	31	.....	.....	.....	3	.....	.....	1	.....	.....
Cadiz	Jan. 19	65,028	45	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Jan. 8	48,521	51	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Jan. 15	48,521	42	.....	.....	.....	.....	.....	.....	.....	.....	.....
Callao	Jan. 5	34,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Jan. 13	23,631	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Jan. 25	17,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Jan. 4	13,500	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	Jan. 12	13,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

Gulf Quarantine Station.—In accordance with instructions from the Secretary of the Treasury, Passed Assistant Surgeon H. R. Carter assumed charge of the quarantine station at North Chandeleur Island on the 23d ultimo, the buildings upon the island having been completed and turned over to the Marine-Hospital Service.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Feb. 2	1,552,988	783	.....	.....	.....	.....	1	.....	5	44	38	29	16
Philadelphia, Pa.	Feb. 2	1,040,245	399	.....	.....	.....	.....	.....	.....	25	9	11	.....	.....
Brooklyn, N. Y.	Feb. 2	814,505	333	.....	.....	.....	.....	.....	.....	1	5	35	6	9
Baltimore, Md.	Feb. 2	500,343	159	.....	.....	.....	.....	.....	.....	3	.....	1	.....	1
San Francisco, Cal.	Jan. 25	330,000	125	.....	.....	1	.....	.....	.....	4	.....	1	.....	.....
Cincinnati, Ohio.	Feb. 2	255,139	112	.....	.....	.....	.....	.....	.....	2	2	7	.....	.....
Detroit, Mich.	Feb. 2	250,000	69	.....	.....	.....	.....	.....	.....	1	2	5	.....	1
New Orleans, La.	Jan. 26	248,000	109	.....	.....	.....	.....	.....	.....	1	.....	4	.....	.....
Milwaukee, Wis.	Feb. 2	210,000	45	.....	.....	.....	.....	.....	.....	.....	1	1	1	.....
Kansas City, Mo.	Feb. 2	180,000	34	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Newark, N. J.	Jan. 29	179,000	60	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....
Providence, R. I.	Feb. 2	127,000	49	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Pittsburgh, Pa.	Feb. 2	.....	.....	.....	.....	.....	.....	.....	.....	1	1	5	.....	2
Rochester, N. Y.	Feb. 2	120,000	28	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1
Richmond, Va.	Feb. 2	100,000	37	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Denver, Colo.	Feb. 1	96,000	41	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....
Toledo, Ohio.	Feb. 2	80,000	16	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Camden, N. J.	Jan. 17	70,000	18	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....
Nashville, Tenn.	Feb. 2	65,153	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	Feb. 2	65,000	.....	.....	.....	.....	.....	.....	.....	.....	5	1	.....	.....
Charleston, S. C.	Feb. 2	60,145	33	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Erie, Pa.	Feb. 2	42,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Manchester, N. H.	Jan. 26	42,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Feb. 2	40,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Jan. 25	40,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa.	Feb. 2	33,715	13	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1
East Saginaw, Mich.	Feb. 2	33,000	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Burlington, Iowa	Feb. 1	30,166	6	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Altoona, Pa.	Jan. 26	30,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Feb. 2	26,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Feb. 2	25,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Jan. 31	22,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Feb. 2	21,553	8	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
Keokuk, Iowa.	Feb. 2	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 7. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., February 15, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended February* 15, 1889, *and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended January 26, corresponded to an annual rate of 20.6 a thousand of the aggregate population, which is estimated at 9,398,273. The lowest rate was recorded in Derby, 12.2, and the highest in Preston, viz., 28.0 a thousand. Diphtheria caused 7 deaths in Manchester, 5 in Salford, and 2 in Leicester.

London.—One thousand six hundred and twenty deaths were registered during the week, including measles, 83; scarlet fever, 20; diphtheria, 33; whooping-cough, 24; enteric fever, 10; diarrhœa and dysentery, 24. The deaths from all causes corresponded to an annual rate of 19.4 a thousand. Diseases of the respiratory organs caused 456 deaths; different forms of violence, 50; and 3 suicides were registered. In greater London 2,038 deaths were registered, corresponding to an annual rate of 18.8 a thousand of the population. In the "outer ring" the deaths included measles, 13; diarrhoea, 9; and whooping-cough, 4.

During the quarter ended December 31, 1888, there were 127,821 deaths registered in England and Wales, corresponding to an annual rate of 17.7 a thousand of the estimated population. The deaths included measles, 4,806; diarrhoea, 2,930; whooping-cough, 2,182; scarlet fever, 1,938; fever, 1,622; diphtheria, 1,491; and small-pox, 25. The deaths from fever included typhus, enteric, and simple or ill-defined forms of continued fever.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended January 26, in the 16 principal town districts of Ireland, was 29.3 a thousand of the population. The lowest

rate was recorded in Wexford, viz., 4.3, and the highest in Lurgan, viz., 61.6 a thousand. In Dublin 186 deaths were registered, including measles, 1; whooping-cough, 4; enteric fever, 2; scarlet fever, 3; diarrhœa, 2; and erysipelas, 2.

Scotland.—The deaths registered in 8 principal towns during the week ended January 26, corresponded to an annual rate of 21.0 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Perth, viz., 9.5, and the highest in Paisley, viz., 27.4 a thousand. The aggregate number of deaths registered from all causes was 537, including small-pox, 2; measles, 19; scarlet fever, 4; diphtheria, 7; whooping-cough, 19; fever, 9, and diarrhœa, 6.

Calcutta.—The total number of deaths registered during the month of November, 1888, was 1,170, corresponding to an annual rate of 32.4. The deaths included cholera, 232; small-pox, 1; fevers, 338; bowel complaints, 121.

Gibraltar.—January 21, 1889: "At a meeting of the Board of Health, held this day, it was decided that all vessels arriving from ports between the equator and 35° south latitude, provided they have been seventeen days out, and have clean bills of health and clean conditions on board, shall be admitted to free pratique."

Buenos Ayres.—One thousand two hundred and eighteen deaths were registered during the month of November, 1888, including small-pox, 6; enteric fever, 18; scarlet fever, 3; and diphtheria, 75. Small-pox has abated, but diphtheria still continues.

Montevideo, Uruguay.—Four hundred and twenty six deaths were registered during the month of November, 1888, including small-pox, 8; enteric fever, 7; and diphtheria, 28. The U. S. consul states that "at this date (December 24) there are some cases of 'cholerine' which always precedes cholera. All precautions are taken to prevent cholera and yellow fever arising in the city."

Nassau, N. P.—February 2, 1889: "No disease of importance. City healthy."

Barbadoes, West Indies.—January 26, 1889: "Health of island good."

Guaymas, Mexico.—Twenty-two deaths were registered during the month of January, 1889. No epidemical sickness. Sanitary condition good.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Jan. 26	2,260,945	1,040	.....	.....	5	.....	14	4	43	49	13
Glasgow	Jan. 26	545,678	255	.....	.....	.....	.....	4	4	1	.....	.....
Warsaw	Jan. 19	444,814	258	.....	.....	4	.....	.....	4	7	.....	.....
Calcutta	Dec. 22	433,219	213	13	.....	.....	.....	.....	.....	.....	.....	.....
Calcutta	Dec. 29	433,219	259	27	.....	1	.....	.....	.....	1	.....	.....
Amsterdam	Jan. 26	399,051	207	.....	.....	.....	.....	2	.....	3	.....	.....
Rome	Dec. 8	293,496	166	.....	.....	3	.....	3	1	3	.....	.....
Copenhagen	Jan. 19	307,000	95	.....	.....	.....	.....	.....	3	2	.....	.....
Palermo	Jan. 26	250,000	89	.....	.....	2	.....	.....	.....	4	.....	.....
Genoa	Jan. 26	179,908	107	.....	.....	3	.....	.....	.....	.....	.....	.....
Toronto	Feb. 2	170,000	33	.....	.....	.....	.....	1	.....	1	.....	.....
Havre	Jan. 26	112,074	.....	.....	.....	2	.....	1	.....	.....	.....	.....
Barmen	Jan. 19	109,000	43	.....	.....	.....	1	.....	.....	.....	.....	.....
Leghorn	Jan. 27	102,540	45	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Jan. 19	65,802	26	.....	.....	.....	1	.....	1	1	.....	.....
Cadiz	Jan. 26	65,028	58	.....	.....	.....	.....	.....	.....	.....	.....	.....
Curaçao	Jan. 27	25,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Jan. 20	23,581	11	.....	.....	.....	.....	.....	.....	1	.....	.....
Kingston, Can	Feb. 1	17,300	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Domingo	Jan. 6	16,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Domingo	Jan. 13	16,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Jan. 19	7,428	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Jan. 26	7,428	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	Dec. 26	5,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Dec. 17	1,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

Brownsville, Tex.—The acting assistant surgeon Marine-Hospital Service reports as follows, under date of February —, 1889:

I have to report one case of small-pox in Fort Brown Military Reservation.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Philadelphia, Pa	Feb. 9	1,040,245	408	.....	.....	.....	1	.....	.....	18	11	10	.....	5
Brooklyn, N. Y	Feb. 9	814,505	315	.....	.....	.....	.....	.....	.....	3	10	28	11	9
Baltimore, Md	Feb. 9	500,343	140	.....	.....	.....	.....	.....	.....	1	.....	2	1	2
Saint Louis, Mo	Feb. 2	440,000	154	.....	.....	.....	.....	.....	.....	1	1	7	4	.....
San Francisco, Cal	Feb. 1	330,000	117	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1
Cincinnati, Ohio	Feb. 9	255,139	96	.....	.....	.....	.....	.....	.....	1	1	3	.....	.....
New Orleans, La	Feb. 2	248,000	112	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Pittsburgh, Pa	Feb. 9	230,000	80	.....	.....	.....	.....	.....	.....	2	.....	1	.....	2
Milwaukee, Wis	Feb. 9	210,000	54	.....	.....	.....	.....	.....	.....	2	3	.....	.....	1
Kansas City, Mo	Feb. 8	180,000	29	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Newark, N. J	Feb. 5	179,000	85	.....	.....	.....	.....	.....	.....	2	1	7	.....	1
Providence, R. I	Feb. 9	127,000	45	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....
Richmond, Va	Feb. 11	100,000	39	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Denver, Colo	Feb. 8	100,000	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toledo, Ohio	Feb. 8	80,000	19	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Camden, N. J	Jan. 24	70,000	22	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Camden, N. J	Jan. 31	70,000	24	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Nashville, Tenn	Jan. 9	65,153	27	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Fall River, Mass	Feb. 9	65,000	22	.....	.....	.....	.....	.....	.....	.....	2	.....	3	.....
Charleston, S. C	Feb. 9	60,145	37	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Lynn, Mass	Feb. 2	50,000	9	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Lynn, Mass	Feb. 9	50,000	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H	Feb. 2	42,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Erie, Pa	Feb. 9	42,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me	Feb. 9	40,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	Feb. 9	33,715	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	.....
East Saginaw, Mich	Feb. 9	33,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Burlington, Iowa	Feb. 9	30,166	5	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Altoona, Pa	Feb. 2	30,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y	Feb. 9	26,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass	Feb. 9	25,000	4	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Newport, R. I	Feb. 7	22,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass	Feb. 9	21,553	9	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa	Feb. 9	16,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla	Feb. 2	15,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 8. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., February 22, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended February 22, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended February 2, corresponded to an annual rate of 18.8 a thousand of the aggregate population, which is estimated at 9,398,273. The lowest rate was recorded in Portsmouth, 14.4, and the highest in Blackburn, viz., 33.6 a thousand. Diphtheria caused 6 deaths in Manchester, 5 in Salford, 3 in Nottingham, and 2 in Sheffield.

London.—One thousand five hundred and seventy-two deaths were registered during the week, including measles, 71; scarlet fever, 11; diphtheria, 38; whooping-cough, 38; enteric fever, 10; diarrhœa and dysentery, 13. The deaths from all causes corresponded to an annual rate of 18.8 a thousand. Diseases of the respiratory organs caused 410 deaths; different forms of violence, 55; and 12 suicides were registered. In greater London 1,942 deaths were registered, corresponding to an annual rate of 18.0 a thousand of the population. In the "outer ring" the deaths included measles, 12; diphtheria, 7; and whooping-cough, 6.

During the year 1888, 510,690 deaths were registered in England and Wales, including diarrhœa, 12,194; whooping-cough, 11,602; measles, 9,513; scarlet fever, 6,240; fever (typhus, enteric, or ill-defined) 5,206; diphtheria, 4,907; small-pox, 1,022. Different forms of violence caused 16,783 deaths. The total number of deaths corresponded to an annual rate of 17.8 a thousand of the estimated population, which is 37,440,505.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended February 2, in the 16 principal town districts of Ireland, was 25.3 a thousand of the population. The lowest rate was recorded in Sligo, viz., 4.8, and the highest in Cork, viz., 31.8 a thousand. In Dublin 187 deaths were registered, including measles, 2; enteric fever, 4; scarlet fever, 3; dysentery, 1; and erysipelas, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended February 2, corresponded to an annual rate of 21.4 a thousand of

the population, which is estimated at 1,314,274. The lowest mortality was recorded in Leith, viz., 13.6, and the highest in Glasgow, viz., 25.1 a thousand. The aggregate number of deaths registered from all causes was 547, including small-pox, 1; measles, 18; scarlet fever, 4; diphtheria, 5; whooping-cough, 20; fever, 9, and diarrhœa, 8.

Marseilles, France.—The U. S. Consul furnishes the following report of vital statistics for the year 1888:

The aggregate mortality and death rate per 1,000 inhabitants at Marseilles, during the past six years, show the following fluctuations:

Year.	*Deaths.*	*Rate per 1,000.*	*Year.*	*Deaths.*	*Rate per 1,000.*
1882	10,915	30.0	1886	13,158	34.9
1883	11,390	31.0	1887	10,967	28.9
1884	12,500	33.0	1888	10,871	28.4
1885	12,152	32.9			

The excessive mortality of 1884 and 1885 was due to the epidemic of cholera which prevailed during those years, and that of 1886 was likewise the result of the visitation of small-pox, which caused the death of 2,031 persons during the year.

During the past year this city has been notably free from epidemics, and the death rate, as above given, may be accepted as about normal for Marseilles in the present condition of its tenements, sewers, and general mode of life.

A comparison of the births and deaths by months during the year just closed gives the following encouraging exhibit:

Months.	*Births.*	*Deaths.*	*Months.*	*Births.*	*Deaths.*
January	1,018	1,091	July	920	890
February	990	1,030	August	926	901
March	1,024	1,109	September	934	815
April	863	921	October	955	810
May	851	905	November	875	741
June	859	831	December	909	827
Total				11,124	10,871

This shows an increase of 107 births over those of 1887, this being the first year since 1881 in which the births have exceeded the number of deaths. Of the 11,124 births recorded 1,649 (or 14.8 per cent.) were illegitimate, a slight falling off from the percentage of the previous year.

In respect to the causes of mortality, pulmonary diseases, as usual, stand at the head of the list, the proportion being as follows: Pneumonia, 1,142; consumption, 1,060; bronchitis, 560; enteritis, 584; convulsion, 500; diphtheria, 468; measles, 331; meningitis; 407; small-pox, 120; athrepsie, 249; scarlet-fever, 19; suicide, 102; all other causes, 5,329.

The most interesting aspect of the death record is that which is obtained by an analysis of the mortality by arrondissements or precincts. No where could be found a more pertinent illustration of the costliness of crowded, ill-kept dwellings, and deficient drainage. In the modern quarters of the city, that of the "Perfecture" and "Palais de Justice" for instance, where the streets are well watered, wide, clean, and the sewers ample and well constructed, the death rate reached only 19.2 and 22, respectively, per thousand inhabitants. In the old, densely built quarter of the City Hall, where the ancient buildings front on narrow,

dark, noisome streets, having only surface sewerage, the death rate reached 40.3 per thousand. In the suburban quarter of Saint Louis, where all sanitary arrangements are primitive to the last degree, and the habits of the people equally so, the mortality was 41.9 per thousand.

Suicides show a slight decrease, the totals being 137 in 1886, 109 in 1887, and 102 in 1888. The marriages numbered 2,964, about the same as those of the preceding year, but divorces increased from 79 in 1887 to 109 last year.

Of all the costly and elaborate sanitary improvements which have been proposed and discussed so earnestly since the cholera visitations of 1884 and 1885, only one is now in process of completion. This is a transverse sewer, about a mile in length, which is being tunneled through rock at a depth of 60 to 80 feet, and which, when completed, will carry the sewage of the southeastern portion of the city, which is now drained into the old Port, to a point on the shore known as the "Catalans," where it will be discharged into the open sea. This will no doubt effect some amelioration, but the still more important and difficult problem of gathering and carrying away the flood of sewage from the ancient portion of the city which lies between the old Port and "La Joliette," and which now pollutes the docks and necessitates constant dredging to keep them navigable, is still unsolved except in theory.

During the month of January, 1889, 950 deaths were registered in an estimated population of 375,378. The deaths included small-pox, 11; enteric fever, 22; diphtheria, 30; measles, 19; whooping-cough, 1; diarrhœa enteritis, 33. The health of Marseilles is in normal condition for the season; the slight increase in small-pox being not greater than the average for January.

Havana, Cuba.—Three deaths from yellow fever were registered during the week ended February 9, 1889.

Cardenas, Cuba.—February 8, 1889: Good health prevails in town and harbor. Weather cool and dry.

Catania, Italy.—The United States consul reports 23 deaths from small-pox during the month of January, 1889. The sanitary condition of the city is not very good.

Trieste, Austria.—The United States consul reports 8 cases and 1 death from small-pox during the month of January, 1889.

San Juan, Porto Rico.—The United States consul reports 74 deaths from all causes during the month of December, 1888, including 1 from yellow fever. "In Ponce some cases of small-pox, and in Curracao also, but all decreasing."

Acapulco, Mexico.—Twenty-four deaths were registered during the month of January, 1889, including dysentery, 2; and small-pox, 3.

Ceara, Brazil.—One hundred and eleven deaths were registered during the month of December, 1888. No contagious diseases. Sanitary condition of city good.

Cardenas, Cuba.—February 15, 1889: Good health prevails in town and harbor. Weather cool and dry.

Nassau, N. P.—February 9, 1889: No prevailing diseases of impor-

tance. City very healthy. The one case of diphtheria, a child, was landed from a ship.

Santiago de Cuba.—The United Stated cousul furnishes the health report for the month of January, as follows:

"Notwithstanding the, for this country, sudden changes of temperature, and the prevailing high winds, the health of this city has been remarkably good during the month of January. The official report of the board of health gives a total of 112 deaths in a population of from 45,000 to 50,000." The deaths included diarrhoea, 12; dysentery, 10; pernicious fever, 4; yellow fever, 17; consumption, 16; tuberculous affections, 11.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Feb. 2	5,642,015	1,942	.....	.....	.....	.....	10	13	45	83	.....
Glasgow	Feb. 2	545,678	255	.....	.....	.....	.....	5	3	.....	.....	.....
Warsaw	Jan. 26	444,814	235	.....	.....	.....	3	.....	7	10	.....	.....
Amsterdam	Feb. 2	399,051	191	.....	.....	.....	.....	1	.....	5	.....	.....
Copenhagen	Jan. 26	307,000	189	.....	.....	.....	.....	.....	2	6	.....	.....
Rio de Janeiro	Jan. 27	300,000	434	.....	109	2	27	9	.....	.....	.....	.....
Munich	Jan. 19	281,000	173	.....	.....	.....	.....	.....	4	1	.....	.....
Palermo	Feb. 2	250,000	98	.....	.....	1	.....	.....	2	3	.....	.....
Bristol	Jan. 26	229,361	80	.....	.....	.....	.....	.....	1	.....	.....	.....
Bristol	Feb. 2	229,361	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belfast	Feb. 2	229,622	119	.....	.....	.....	1	6	.....	2	.....	.....
Genoa	Feb. 2	179,884	131	.....	.....	.....	1	.....	.....	2	.....	.....
Toronto	Feb. 9	170,000	30	.....	.....	.....	1	1	.....	3	.....	.....
Trieste	Jan. 19	154,500	99	.....	.....	3	.....	1	.....	6	.....	.....
Trieste	Jan. 26	154,500	97	.....	.....	5	.....	.....	.....	.....	.....	.....
Stuttgart	Jan. 26	125,510	47	.....	.....	.....	.....	.....	1	1	.....	.....
Stuttgart	Feb. 2	125,510	49	.....	.....	.....	.....	.....	.....	3	.....	.....
Pernambuco	Jan. 15	110,000	64	.....	.....	.....	.....	1	2	.....	.....	.....
Barmen	Jan. 26	109,000	44	.....	.....	.....	1	.....	.....	.....	.....	1
Leghorn	Feb. 4	102,893	58	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Jan. 26	65,802	28	.....	.....	.....	.....	.....	.....	1	.....	.....
Cadiz	Feb. 2	65,028	51	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Jan. 29	48,121	52	.....	.....	.....	.....	.....	.....	.....	.....	.....
Callao	Jan. 19	34,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Jan. 27	23,581	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Feb. 15	17,300	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antigua	Feb. 3	15,847	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nassau, N. P	Feb. 9	12,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Jan. 21	1,004	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Jan. 28	1,004	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

New York Quarantine.—History of the Recent Outbreak of Yellow Fever on the United States Steamers Boston and Yantic.—Dr. Wm. M. Smith, health officer at the port of New York, furnishes advance sheets of so much of his annual report as relates to these steamers after their return from Hayti with yellow fever on board, as follows:

The United States Steamship "Boston," Captain Ramsey, arrived at quarantine November 24, 1888, from Port au Prince, the 16th of the same month, with three cases of yellow fever on board.

The "Boston" touched at Jamaica, West Indies, on the way out

from New York, October 10; sailed from Port Royal the 13th of the same month and arrived at Livingston, Central America, the 17th. The cruiser touched at the Corn Islands the 23d of October, sailed from there the 24th, arrived at Greytown the 25th and at Port Royal again the 31st of October, for coal. Some of the officers and stewards visited Kingston while at Port Royal. November 5 the "Boston" arrived at Port au Prince and sailed for New York the 16th of the same month.

The vessel anchored and remained in the outer bay during the stay at Port au Prince, a distance of about two miles from the town. Only the captain, one of his aids, and two or three of the cadets went ashore. A steam-launch was used in the communication between the vessel and the shore, which, in every instance, was ordered to lie off at a distance from the wharf while waiting for the return of the officer on shore, and in case it was anticipated that the detention would be considerable, the launch returned to the "Boston."

A consideration of the details of the "Boston's" communication with the different ports is necessary to determine at which port, and under what circumstances, those who took the disease became infected.

November 9, Seaman Lassiter was taken sick. The symptoms in this case were so mild that, but for the development of unmistakable symptoms of yellow fever in subsequent cases, it is probable that the case would not have been diagnosed as yellow fever.

John J. Kelly, apprentice boy, was taken sick the 14th and died the 20th. Surgeon W. J. Simon became ill the 15th and died the 26th—two days after arrival at quarantine. Seaman Ewing J. Thrapp was seized the 17th and died the 20th. John Ulzmier, John Rutzell, marines, and Frank Thomas, seaman, were taken sick the 18th; the former died the 21st of November, the second the 23d, the latter recovered and was discharged irom the quarantine hospital. Charles Mitchell, seaman, sickened the 19th; was removed at quarantine, and subsequently discharged from Swinburne Island Hospital.

The symptoms in these cases, as seen through the intelligent record of Passed Assistant-Surgeon Lumsden, leave no room for doubt that his diagnosis of yellow fever was correct. The temperature of the patients varied from 100° at the invasion, to 105.8° at the period of the greatest pyrexia. The pulse was often much accelerated in the first twenty-four hours, in some cases running as high as 120, and declining in frequency as the disease progressed and the temperature increased. In the case of Thrapp, who died the fourth day after seizure, the pulse was 120 the first day of the attack, and 72 the day preceding death; the second day of his illness the thermometer indicated 104° F., and the pulse numbered 80. As the stage of collapse approached, the temperature declined, in most instances below the normal standard, and the pulse became less frequent. The tongue was usually "furred centrally, and the edges red;" in the first stages the face was flushed and the eyes congested. As the disease progressed the skin became yellow. "Dark brown" or "black vomit" occurred in every fatal case, and in one case that recovered (Frank Thomas). In every case the urine was scanty and albuminous, the quantity of albumen varying from 10 to 20 per cent. Secretion from the kidneys was suspended for twenty-four hours before the death of Doctor Simon.

The United States steamship "Yantic," Commander Heyerman, arrived at quarantine January 10, 1889, 10 p. m., from Port au Prince with 3 cases of yellow fever on board; one man was reported to have died of the disease on the voyage. To the log of Commander Heyerman,

and the notes of Surgeon McCarthy I am indebted for the following facts:

The "Yantic" went from New York direct to Port au Prince where she arrived December 20th, and proceeded immediately to the inner harbor, anchoring within a hundred yards of the shore, and in close proximity to the steamer "Haytien Republic." Commander Heyerman was under orders from Admiral Luce to take the "Haytien Republic" out of the harbor before sunset, if it was necessary to cut her anchor-chains to obey the order. The "Yantic" remained near the shore the most of the day, and until the "Haytien Republic" could be taken to the outer harbor. The anchorage made outside was 1½ miles from the town. The 23d of December the "Yantic" left Port au Prince for Santiago de Cuba, arrived there the 24th, and sailed again for Port au Prince the 27th of December; arrived there the 28th, and anchored between one and two miles from the wharves of the city. January 1st the "Yantic" sailed for New York.

The day of the return of the "Yantic" to Port au Prince (December 28th), Lieutenant Charles R. Miles was taken sick. The symptoms in this case speedily convinced Surgeon McCarthy that he had yellow fever on board. On the arrival of the "Yantic" at the New York quarantine Lieutenant Miles was in a semi-conscious state, and so feeble that it was not proper to remove him to the quarantine hospital. He died on the 14th. The 29th H. L. Kellar (equipment yeoman) was taken sick; Mark L. Bristol (naval cadet) the 30th, and Charles W. Rowe the 31st. Keller's case was mild; Bristol's severe; he was delirious, and had "black vomit" the third day of the attack. Corporal Rowe died the 7th of January. Bristol and Kellar were removed to the quarantine hospital, and were subsequently discharged from there.

It is important to determine the source of the infection which infected the victims of the "Boston" and "Yantic," to enable those who touch or lie near infected ports to escape this fatal disease.

There is a concurrence of testimony among the officers of the "Boston," that none of those who had yellow fever on that vessel were ashore while the vessel was at Port au Prince. The steamer was anchored too far in the open bay to warrant the belief that the infection was carried thither by the wind blowing from the shore.

The utmost caution was observed in communicating with the shore, while at Port au Prince, by the commanding officers of the "Boston" and "Yantic;" and the fact that none of the officers who were ashore, or of the crew who manned the boats used by them, had yellow fever, affords very positive evidence that the precautions taken were effectual. It may be assumed that the men on the "Boston" were infected at one of the several ports touched at before reaching Port au Prince. This is scarcely possible. The last port touched at by the "Boston" was Port Royal, the 31st of October, fourteen days before the development of the first well-marked case, and nine days before the doubtful case of Lassiter above mentioned. The incubative period of yellow fever seldom exceeds five days. Those cases which have seemed to be an exception to this rule, in many instances have been concealed for the first day either ignorantly or intentionally. There are, however, some instances in which the evidence would *seem* to prove that the incubation of the disease may be protracted considerably beyond five days. It is believed that such instances are rare exceptions to the rule.

There is good reason to believe that in many instances the incubative

period of the disease is much less than five days. Doubtless the period varies in different individuals, owing to differences in the virulence of the infection, and to the varying susceptibilities of individuals which favor a greater or less rapidity of development. In this respect yellow fever is similar to malarial diseases, and unlike such contagious diseases as small-pox, in which the incubative period is certain and well known.

Neither the "Boston" or the "Yantic" received anything on board from the shore, while at Port au Prince, except meat and fruit. The fruit, consisting of bananas and oranges, was taken to the vessels by natives in what is called "bumboats," and is sold to those on board. The main-decks of the "Boston" and "Yantic" are so low that communication between those on them and the "bumboats" was easy, and doubtless frequent, while the natives were vending their fruit. The wet, dirty, and sun-heated bottoms and timbers of the boats of the natives, exposed as they must be at all times, when at the shore or wharves, to an infected atmosphere as well as to the infected filth of the gutters that drain into the bay, certainly supply all the conditions necessary for the propagation of the infection. It would be rather a matter of surprise than otherwise if the boats of the natives were not impregnated with the infection of yellow fever when it prevails at Port au Prince.

The officers of the "Yantic" generally believe that the disease was contracted on the 20th of December, from proximity to the shore while engaged in the preparation to take the "Haytien Republic" out of the harbor. The objection to this is, that it was eight days subsequent to that exposure before the first case of yellow fever developed, an unusually long period for the incubation of the infection. And it should be bourne in mind, in this connection, that the disease was even more virulent on the "Boston," which was anchored nearly two miles from the city during the period of her stay in Haytien waters.

The period covered by the development of yellow fever on board of the "Boston" affords pretty conclusive evidence that the disease was contracted while at Port au Prince. The same is true of the "Yantic," unless it is assumed that the victims on that vessel contracted the disease while at Santiago. There is reason to believe from consular reports, and from other sources of information, that there was no yellow fever at that port when the "Yantic" was there. For the same reason it is believed that the "Boston's" people did not contract the disease at the ports touched before their arrival at Port au Prince, and for the additional one that the first unmistakable case did not develop until ten days after leaving the last of those ports—Kingston.

No case occurred on the "Boston" after the third day out from Port au Prince *en route* for New York. The cases on the "Yantic" developed the 28th, 29th, 30th, and 31st of December. The vessel sailed for New York the day following the development of the last case. No case occurred after leaving Port au Prince.

The history of the disease on the "Boston" and the "Yantic" affords satisfactory evidence to the writer that the persons who suffered from it contracted the infection while at Port au Prince, and that the infection did not infect either vessel. In other words, that the infection was limited to the individuals who contracted the infection at that port. Nevertheless, both vessels named were thoroughly cleansed and disinfected with a solution of mercuric chloride, one to five hunderd, and repeated fumigations with sulphurous acid gas, produced by the

combustion of sulphur in the proportion of 3 pounds to 1,000 cubic feet of space. All textile fabrics were subjected to one or the other of these agents, and in case of the "Yantic" were subsequently exposed for a considerable time to a temperature several degrees below 32° Fahrenheit.

The same measures were taken with these vessels that have been adopted with hundreds of vessels that have arrived at the New York quarantine during the past nine years with yellow fever on board, no one of which has ever given evidence of any remaining infection.

The "Boston" was discharged from quarantine December 3d and the "Yantic" on January 21st. It is believed that they were as free from the infection of yellow fever at the time of their discharge as when they sailed for the West Indies on their last cruise.

By direction of the Secretary of the Navy, these vessels were again thoroughly cleansed and fumigated, under the supervision of Assistant Surgeon William Martin, U. S. N.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Feb. 9	1,553,860	818	.....	.....	.....	.....	1	.....	2	54	47	26	10
New York, N. Y.	Feb. 16	1,553,860	786	.....	.....	1	.....	.....	.....	4	47	52	24	10
Philadelphia, Pa	Feb. 16	1,040,245	417	.....	.....	.....	.....	.....	.....	21	8	9	.....	5
Chicago, Ill	Feb. 16	830,000	242	.....	.....	.....	.....	.....	.....	4	3	28	5	2
Brooklyn, N. Y.	Feb. 16	814,505	364	.....	.....	.....	.....	.....	.....	1	9	36	4	10
Baltimore, Md.	Feb. 16	500,343	155	.....	.....	.....	.....	.....	.....	1	.....	6	.....	.....
San Francisco, Cal.	Feb. 8	330,000	127	.....	.....	1	.....	.....	.....	3	.....	1	.....	.....
Cincinnati, Ohio	Feb. 16	255,139	114	.....	.....	.....	.....	.....	.....	3	1	2	.....	.....
Detroit, Mich.	Feb. 16	250,000	63	.....	.....	.....	.....	.....	.....	.....	4	1	.....	2
New Orleans, La.	Feb. 9	248,000	111	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1
Pittsburgh, Pa.	Feb. 16	230,000	.....	.....	.....	.....	.....	.....	.....	3	1	3	1	1
Washington, D. C.	Feb. 16	225,000	108	.....	.....	.....	.....	.....	.....	2	1	1	.....	2
Milwaukee, Wis.	Feb. 16	210,000	75	.....	.....	.....	.....	.....	.....	.....	7	2	.....	1
Minneapolis, Minn.	Feb. 16	180,000	46	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Kansas City, Mo.	Feb. 16	180,000	35	.....	.....	.....	.....	.....	.....	1	2	1	.....	.....
Saint Paul, Minn.	Feb. 10	180,000	28	.....	.....	.....	.....	.....	.....	.....	1	3	1	.....
Saint Paul, Minn.	Feb. 17	180,000	31	.....	.....	.....	.....	.....	.....	4	2	1	.....	.....
Newark, N. J.	Feb. 12	179,839	70	.....	.....	.....	.....	.....	.....	4	.....	9	.....	.....
Providence, R. I.	Feb. 16	127,000	56	.....	.....	.....	.....	.....	.....	3	.....	3	.....	1
Rochester, N. Y.	Feb. 9	120,000	45	.....	.....	.....	.....	.....	.....	1	.....	2	.....	2
Rochester, N. Y.	Feb. 16	120,000	47	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1
Denver, Colo.	Feb. 15	100,000	33	.....	.....	.....	1	.....	.....	.....	.....	2	.....	.....
Richmond, Va.	Feb. 18	100,000	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toledo, Ohio	Feb. 15	80,000	24	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Camden, N. J.	Feb. 7	70,000	21	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Camden, N. J.	Feb. 14	70,000	16	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Nashville, Tenn.	Feb. 16	65,153	17	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Fall River, Mass.	Feb. 16	65,000	32	.....	.....	.....	.....	.....	.....	.....	1	3	.....	.....
Charleston, S. C.	Feb. 16	60,145	31	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Lynn, Mass	Feb. 16	50,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Feb. 16	40,000	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	Feb. 15	35,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	Feb. 16	33,715	10	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
East Saginaw, Mich.	Feb. 16	33,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	Feb. 9	30,000	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Auburn, N. Y.	Feb. 16	26,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Feb. 16	25,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Feb. 14	22,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Feb. 16	21,553	12	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Kingston, Canada	Feb. 8	17,300	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	Feb. 16	16,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Feb. 9	15,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Feb. 16	15,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,
Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 9. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., March 2, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended March 2, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended February 9, corresponded to an annual rate of 19.1 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz., 11.1, and the highest in Blackburn, viz., 32.3 a thousand. Diphtheria caused 9 deaths in Manchester, 2 in Salford, 2 in Preston, 2 in Bristol, and 2 in Sunderland.

London.—One thousand four hundred and sixty deaths were registered during the week, including measles, 56; scarlet fever, 12; diphtheria, 24; whooping-cough, 33; enteric fever, 5; diarrhœa and dysentery, 18. The deaths from all causes corresponded to an annual rate of 17.5 a thousand. Diseases of the respiratory organs caused 340 deaths; different forms of violence, 49; and 10 suicides were registered. In greater London 1,837 deaths were registered, corresponding to an annual rate of 17.0 a thousand of the population. In the "outer ring" the deaths included measles, 18; diphtheria, 5; and whooping-cough, 8.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended February 9, in the 16 principal town districts of Ireland, was 25.2 a thousand of the population. The lowest rate was recorded in Newry, viz., 7.0, and the highest in Londonderry, viz., 30.3 a thousand. In Dublin 166 deaths were registered, including whooping-cough, 3; enteric fever, 4; scarlet fever, 3; diarrhœa, 3; and erysipelas, 1.

Valencia, Spain.—Yellow Fever.—The U. S. Consul at Puerto Cabello, under date of February 7, 1889, states that—

The *Boz Publica*, a journal published in the city of Valencia, within this consular district, contains, under date of February 6, 1889, the in-

closed proclamation by the mayor of said city, which I hasten to transmit to the Department of State. I write, to-day, to Mr. Grosewisch, United States consular agent at valencia, requesting him to obtain all the information he can procure concerning this epidemic of yellow fever, and to send me his report as soon as possible for transmission to the Department of State. Although the city of Valencia is only 42 miles distant from Puerto Cabello, and in daily communication with it by rail, I am glad to state that there is not, and there has not been, as yet, a single case of yellow fever in this port. Should the disease make its appearance here, I shall immediately notify the Department thereof, pursuant to paragraph 335, Consular Regulations.

Proclamation of Mayor of Valencia.

The Jefatura Civil (Mayoralty) of the District—

Considering that yellow fever is spreading more and every day throughout this city, assuming now the character of an epidemic, and that there are well founded reasons for believing that, in spite of the utmost diligence on the part of the military commander at this post for preserving the cleanliness of the premises occupied as soldiers' barracks, this latter place is, nevertheless, one of the centers of infection which vitiate the atmosphere, because the filth thereof (fecal matter) is deposited therein during the day, and is thence carried away during the night through a considerable portion of the inhabited quarters of the city, to be cast out at the edge of the town.

Resolved, To appoint a commission composed of the duly empowered doctors, Manuel Cardenas, Eduardo Celes, and José Rafael Revenga, to study the subject and report, within the shortest possible delay, to this Jefetura.

Martinique.—The U. S. Consul reports, under date of February 5th, that "the health of this island is now perfect, and there has not been, since the 8th of January past, even an isolated case of any contagious malady whatsoever."

Bahia, Brazil.—January 26: No contagious diseases.

Ceara, Brazil.—One hundred and seventy deaths were registered during the month of January, 1889. No contagious diseases.

Merida, Mexico.—Forty-two deaths were registered during the week ended January 22, 1889. Yellow, gastric, malarial, and enteric fevers prevail, but no deaths from those diseases are reported.

Bordeaux, France.—Five hundred and eighty-seven deaths were registered during the month of January, 1889, including enteric fever, 16, and diphtheria and croup, 21.

Barbadoes, W. I.—February 9: Health of island good.

Nassau, N. P.—February 16: No prevailing diseases of importance. City very healthy.

Havana, Cuba.—Four deaths from yellow fever were registered during the week ended February 15, and one during the week ended February 21, 1889.

Cardenas, Cuba.—February 22: Good health prevails in town and harbor. Weather dry and pleasant.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Feb. 9	5,642,015	1,837	.....	.....	.....	.....	5	14	29	74	.....
Paris	Feb. 9	2,260,945	1,013	.....	.....	1	.....	12	3	36	36	9
Glasgow	Feb. 9	545,678	273	.....	.....	.....	.....	3	2	7	.....	.....
Warsaw	Feb. 2	444,814	260	.....	.....	7	.....	.....	10	9	.....	.....
Calcutta	Jan. 5	433,219	293	29	.....	.....	.....	.....	.....	.....	1	.....
Amsterdam	Feb. 9	399,051	179	.....	.....	.....	.....	2	.....	6	17	.....
Rome	Dec. 22	393,496	227	.....	.....	4	.....	8	.....	6	.....	.....
Rome	Dec. 29	393,496	170	.....	.....	2	.....	.....	1	3	.....	.....
Copenhagen	Feb. 2	307,000	115	.....	.....	.....	.....	2	.....	1	.....	.....
Munich	Jan. 26	281,000	169	.....	.....	.....	.....	2	.....	.....	.....	.....
Edinburgh	Jan. 19	266,900	92	.....	.....	.....	.....	3	4	13	.....	.....
Edinburgh	Jan. 26	266,900	94	.....	.....	.....	7	1	.....	3	.....	.....
Palermo	Feb. 9	250,000	115	.....	.....	4	.....	.....	.....	1	.....	.....
Belfast	Feb. 9	229,622	129	.....	.....	.....	.....	7	1	.....	.....	.....
Bristol	Feb. 9	229,361	84	.....	.....	.....	.....	.....	.....	2	.....	.....
Genoa	Feb. 9	179,870	91	.....	.....	3	.....	.....	.....	.....	.....	.....
Toronto	Feb. 16	170,000	51	.....	.....	.....	.....	.....	.....	2	.....	.....
Trieste	Feb. 2	154,500	108	.....	.....	4	.....	1	.....	3	.....	.....
Stuttgart	Feb. 9	125,510	45	.....	.....	.....	.....	.....	.....	1	.....	.....
Havre	Feb. 9	112,074	68	.....	.....	9	.....	3	2	.....	.....	.....
Pernambuco	Jan. 22	110,000	72	.....	1	.....	2	1	2	.....	.....	.....
Pernambuco	Jan. 29	110,000	66	.....	.....	.....	2	.....	1	.....	.....	.....
Barmen	Feb. 2	109,000	37	.....	.....	.....	.....	.....	.....	.....	2	1
Barmen	Feb. 9	109,000	25	.....	.....	.....	.....	.....	.....	2	.....	.....
Leghorn	Feb. 10	102,893	41	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	Jan. 19	74,320	20	.....	.....	.....	.....	.....	.....	1	.....	.....
Leith	Jan. 26	74,320	28	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Feb. 2	65,802	28	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Feb. 9	65,028	48	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Feb. 14	48,502	40	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Jan. 7	30,000	53	.....	.....	3	.....	11	.....	.....	15	.....
Guayaquil	Jan. 14	30,000	69	.....	.....	3	.....	14	.....	.....	11	.....
Gibraltar	Feb. 3	23,631	9	.....	.....	.....	.....	.....	.....	1	.....	.....
Kingston, Can	Feb. 22	17,300	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Feb. 8	13,500	34	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Feb. 2	7,428	8	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

By direction of this bureau, a sample of the water furnished by the city water-works to the city of Lake View, near Chicago, Ill., and to the United States Marine Hospital, located at that place, for the port of Chicago, Ill., has been chemically analysed at the laboratory of the Marine-Hospital Service, at the port of New York. The report of the analysis is as follows:

Color (through 12 inches).....Yellow.
Sediment.....Abundant, yellowish, flocculent.
Luster.....None.
Taste, smell.....Offensive.

Suspended Matter.

	m. g. per liter.
Fixed (principally oxide iron)	82
Volatile (organic)	170
	252

Constituents of Filtered Water.

		m. g. per liter.
Residue.	Volatile (organic)	103
	Fixed (mineral)	98
		201

	m. g. per liter.
Ammonia, free	.09
Ammonia, albuminoid	.32
Total, ammonia	.41
Nitrates and nitrites (calculated as ammon.)	.08
Hardness by Clark's test—	
Removable	0.00°
Permanent	3.85°
Total	3.85°

Mineral Constituents.

	m. g. per liter.
Sulphate Lime	92.00
Sulphate Magnesia	3.00
Silica	2.00
	97.00

A very dangerous water for all domestic purposes. The content of albuminoid ammonia at once puts it in the category of suspicious waters. The content of nitrates and nitrites point to sewage contamination. The use of the water should be discontinued.*

Respectively submitted,

H. D. GEDDINGS,
Assistant Surgeon Marine-Hospital Service.

An analysis of the spring water which was used at the yellow fever refuge camp at Camp Perry, Florida, during the recent epidemic in Florida, has also been made, which shows that it is of fair quality as a potable water. The report is as follows:

Physical Characters.

Color (through 12 inches)	† Yellowish.
Turbidity	None.
Sediment	None.

Ingredients.

	‡ m. g. per liter.
Fixed	87
Volatile at low red heat	71
Total	158

* As a matter of fact, the use of the water was discontinued for drinking purposes, about two years since, and is now used in the hospital only for general purposes, and after filtration by a steam-filter. A bacteriological examination of the water will be made, but the chemical analysis, as shown above, has a peculiar significance at this time, in view of the presence of a considerable epidemic of typhoid fever in the region of the city supplied by the Lake View Water Works.

† Probably due to fact that the sample was sent in a new oaken keg.

‡ m. g. per liter = parts per 1,000,000.

	* m. g. per liter.
Ammonia, free	0.16
Ammonia, albuminoid	0.22
Nitrates and nitrites	None.

Fixed Ingredients.

Calcium, carbonate	82.00
Magnesium, carbonate	3.00
Lithium (by flame coloration)	A trace.
Iron	A trace.
Total	85.00

Respectfully submitted,

H. D. GEDDINGS,

Assistant Surgeon Marine-Hospital Service.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Feb. 23	1,555,604	870	.....	.....	.....	.....	.....	.....	4	58	52	12	15
Philadelphia, Pa.	Feb. 23	1,040,245	347	.....	.....	.....	.....	.....	.....	18	11	7	1	4
Chicago, Ill	Feb. 23	830,000	246	.....	.....	.....	.....	.....	.....	2	5	22	4	2
Brooklyn, N. Y.	Feb. 23	814,505	341	.....	.....	.....	.....	.....	.....	.....	12	19	9	10
Baltimore, Md.	Feb. 23	500,343	178	.....	.....	.....	.....	.....	.....	2	.....	2	.....	2
San Francisco, Cal.	Feb. 15	330,000	110	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Cincinnati, Ohio	Feb. 23	255,139	103	.....	.....	.....	.....	.....	.....	8	.....	.....	.....	.....
Pittsburgh, Pa.	Feb. 23	.....	67	.....	.....	.....	.....	.....	.....	1	2	4	2	3
Washington, D. C.	Feb. 23	225,000	102	.....	.....	.....	.....	.....	.....	4	1	2	.....	3
Kansas City, Mo.	Feb. 23	180,000	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Newark, N. J.	Feb. 19	179,139	94	.....	.....	.....	.....	.....	.....	5	.....	2	.....	1
Providence, R. I.	Feb. 23	127,000	51	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Rochester, N. Y.	Feb. 23	120,000	44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2
Denver, Colo.	Feb. 22	100,000	26	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Toledo, Ohio	Feb. 22	80,000	19	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Nashville, Tenn.	Feb. 23	65,153	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	Feb. 23	65,000	26	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Charleston, S. C.	Feb. 23	60,145	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Lynn, Mass	Feb. 23	50,000	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H	Feb. 16	42,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Feb. 23	40,000	14	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Wheeling, W. Va	Feb. 16	35,000	5	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Davenport, Iowa	Feb. 23	33,715	11	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....
East Saginaw, Mich.	Feb. 23	33,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	Feb. 16	30,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Feb. 23	26,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Feb. 23	25,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Feb. 21	22,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Feb. 23	21,553	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

* m. g. per liter = parts per 1,000,000.

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 10. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., March 8, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended March 2, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended February 16, corresponded to an annual rate of 19.8 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Leicester, viz., 13.9, and the highest in Manchester, viz., 29.3 a thousand. Diphtheria caused 6 deaths in Manchester, 7 in Salford, 2 in Oldham, 2 in Sheffield, and 2 in Hull.

London.—One thousand five hundred and sixteen deaths were registered during the week, including measles, 43; scarlet fever, 16; diphtheria, 24; whooping-cough, 31; enteric fever, 13; diarrhœa and dysentery, 10; and cholera nostras, 1. The deaths from all causes corresponded to an annual rate of 18.2 a thousand. Diseases of the respiratory organs caused 376 deaths; different forms of violence, 44; and 7 suicides were registered. In greater London 1,894 deaths were registered, corresponding to an annual rate of 17.5 a thousand of the population. In the "outer ring" the deaths included measles, 6; diphtheria, 4; and whooping-cough, 13.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended February 16, in the 16 principal town districts of Ireland, was 27.5 a thousand of the population. The lowest rate was recorded in Armagh, viz., 5.2, and the highest in Dundalk, viz., 39.3 a thousand. In Dublin 199 deaths were registered, including

whooping-cough, 5; enteric fever, 1; typhus, 1; diarrhœa, 1; and measles, 3.

Scotland.—The deaths registered in 8 principal towns during the week ending February 16, corresponding to an annual rate of 21.6 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Perth, viz., 15.8 and the highest in Glasgow, viz., 25.3 a thousand. The aggregate number of deaths registered from all causes was 553, including small-pox, 0; measles, 23; scarlet fever, 3; diptheria, 8; whooping-cough, 18; fever, 2; and diarrhœa, 7.

Puerto Cabello and Valencia, Venezuela.—The United States Consul, under date of February 18, 1889, transmits the report of the United States Consular Agent at Valencia, Venezuela,* relative to the epidemic of yellow fever, which was reported to exist in that city, notice of which was given in Abstract No. 9, dated March 2, 1889. He adds that the sanitary condition of Puerto Cabello continues good, and no case of yellow fever is known to exist in that city. The report is as follows:

UNITED STATES CONSULAR AGENCY,
VALENCIA, VENEZUELA, *February* 16, 1889.

As to the proclamation of the Jefe Civil, I understand that the same is of a more precautionary character in case yellow fever should take an epidemical form here; for it happens almost every year during the dry season, this time so very strong and prolonged, that cases of yellow fever occur. It cannot be said that yellow fever exists here now in an epidemical form, for up to this day the number of deaths does not exceed eight, and to-day only three sick persons are known, and these will most likely get through. In general, persons of the lower classes are attacked by the fever, not only in the city itself, but also in its environs, and in most cases a favorable result depends upon whether medical assistance is administered promptly or not.

Rio de Janeiro, Brazil.—Four hundred and sixty-three deaths were registered during the week ended February 3, 1889, including yellow fever, 127; small-pox, 1; typhus fever, 26; enteric fever, 11. The deaths from all causes during the month of January, 1889, numbered 1,714, the largest number on record.

Havana, Cuba.—Four hundred and twenty-six deaths were registered during the month of February, 1889, including yellow fever, 12; so-called pernicious fever, 18; paludal fever, 1; enteric fever, 4; small-pox, 1; and croup, 5.

There were four deaths from yellow fever during the week ended February 28, 1889.

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* This was erroneously reported in Abstract No. 9 as Valencia, Spain.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
London	Feb. 16	5,642,015	1,894	.....	.....	.....	.....	13	7	28	49	.....
Paris	Feb. 16	2,260,945	1,037	.....	.....	1	.....	17	1	10	35	.....
Glasgow	Feb. 16	545,678	257	.....	.....	.....	.....	1	.....	4	.....	.....
Warsaw	Feb. 9	444,814	219	.....	.....	4	.....	.....	4	5	.....	.....
Calcutta	Jan. 12	433,219	246	21	.....	.....	.....	.....	.....	.....	1	.....
Rome	Jan. 5	401,044	182	.....	.....	5	.....	3	.....	6	.....	.....
Rome	Feb. 20	401,044	250	.....	.....	5	.....	6	.....	2	.....	.....
Amsterdam	Feb. 16	399,051	213	.....	.....	.....	.....	2	.....	3	.....	.....
Copenhagen	Feb. 9	397,000	114	.....	.....	.....	.....	1	.....	5	.....	.....
Edinburgh	Feb. 9	266,900	99	.....	.....	.....	.....	.....	.....	2	.....	.....
Belfast	Feb. 16	229,622	124	.....	.....	.....	.....	1	.....	2	.....	.....
Bristol	Feb. 16	229,361	102	.....	.....	.....	.....	1	.....	.....	.....	.....
Genoa	Feb. 16	179,879	83	.....	.....	3	.....	.....	.....	3	.....	.....
Toronto	Feb. 23	170,000	41	.....	.....	.....	.....	1	.....	4	.....	.....
Trieste	Feb. 9	154,500	96	.....	.....	4	.....	.....	.....	5	.....	.....
Stuttgart	Feb. 16	125,510	62	.....	.....	.....	.....	.....	2	4	.....	.....
Havre	Feb. 16	112,074	52	.....	.....	2	.....	.....	.....	.....	.....	.....
Barmen	Feb. 16	109,000	39	.....	.....	.....	.....	.....	.....	1	.....	.....
Leghorn	Feb. 17	102,893	37	.....	.....	.....	.....	1	.....	.....	.....	.....
Leith	Feb. 9	76,400	16	.....	.....	.....	.....	.....	.....	1	.....	.....
Mayence	Feb. 9	65,802	23	.....	.....	.....	.....	.....	1	1	.....	.....
Cadiz	Feb. 16	65,028	58	.....	.....	.....	.....	.....	.....	.....	.....	.....
Callao	Jan. 26	34,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Curaçao	Feb. 16	25,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Feb. 10	23,381	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Feb. 17	23,381	9	.....	.....	.....	.....	.....	.....	1	.....	.....
Kingston, Can	Mar. 1	17,300	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	Feb. 2	13,000	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	Feb. 9	13,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

Little Rock, Ark.—Small-pox.—The following telegram has been received from Acting Assistant Surgeon L. P. Gibson, M.-H. S.:

March 8, 1889: Nine cases of small-pox have just been discovered in this city, some of them having existed unknown to health authorities since January. Nothing was done to prevent spread of disease until to-day, when the city board of health took charge of the matter and is now using necessary precautions.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Mar. 2	1,556,476	.....	.....	.....	.....	.....	.....	.....	6	50	35	26	18
Philadelphia, Pa.	Mar. 2	1,040,245	425	.....	.....	.....	.....	.....	.....	18	6	6	2	8
Chicago, Ill	Mar. 2	830,000	296	.....	.....	.....	.....	.....	.....	9	4	16	5	.....
Brooklyn, N. Y.	Mar. 2	814,505	365	.....	.....	.....	.....	.....	.....	1	6	27	7	11
Baltimore, Md.	Mar. 2	500,343	158	.....	.....	.....	.....	.....	.....	4	2	2	.....	1
St. Louis, Mo.	Feb. 23	440,000	161	.....	.....	.....	.....	.....	.....	1	2	10	4	3
San Francisco, Cal.	Feb. 22	330,000	111	.....	.....	.....	.....	.....	.....	4	.....	2	.....	.....
Cincinnati, Ohio	Mar. 2	255,139	114	.....	.....	.....	.....	.....	.....	2	.....	6	.....	.....
New Orleans, La.	Feb. 23	254,000	93	.....	.....	.....	.....	.....	.....	2	.....	3	.....	1
Detroit, Mich.	Mar. 2	250,000	59	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Pittsburgh, Pa.	Mar. 2	230,000	94	.....	.....	.....	.....	.....	.....	3	1	2	6	3
Washington, D. C.	Mar. 5	225,000	100	.....	.....	.....	.....	.....	.....	1	1	3	.....	2
Milwaukee, Wis.	Mar. 2	210,000	63	.....	.....	.....	.....	.....	.....	1	2	1	.....	1
Louisville, Ky.	Mar. 2	200,000	61	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1
Minneapolis, Minn.	Feb. 23	180,000	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minneapolis, Minn.	Mar. 2	180,000	49	.....	.....	.....	.....	.....	.....	1	.....	7	.....	.....
Newark, N. J.	Feb. 26	179,139	104	.....	.....	.....	.....	.....	.....	3	.....	4	.....	2
Providence, R. I.	Mar. 2	127,000	60	.....	.....	.....	.....	.....	.....	2	.....	1	.....	2
Richmond, Va.	Mar. 2	100,000	29	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....
Denver, Colo.	Mar. 1	100,000	31	.....	.....	1	.....	.....	.....	.....	1	1	.....	.....
Toledo, Ohio	Mar. 1	80,000	19	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Camden, N. J.	Feb. 21	70,000	26	.....	.....	.....	.....	.....	.....	4	1	.....	.....	.....
Nashville, Tenn.	Mar. 2	65,153	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	Mar. 2	65,100	26	.....	.....	.....	.....	.....	.....	.....	3	.....	.....	.....
Charleston, S. C.	Mar. 2	60,145	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynn, Mass	Mar. 2	50,000	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Manchester, N. H	Feb. 23	42,000	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Feb. 15	40,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Feb. 22	40,000	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Mar. 2	40,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Erie, Pa.	Feb. 16	39,000	13	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Council Bluffs, Iowa	Feb. 23	35,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Saginaw, Mich.	Mar. 2	33,000	9	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Altoona, Pa.	Feb. 23	30,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	Mar. 2	30,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Mar. 2	26,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Mar. 2	25,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Feb. 28	22,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	Mar. 2	16,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Mar. 2	15,000	7	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 11. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., March 15, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended March* 15, 1889, *and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended February 23, corresponded to an annual rate of 19.9 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz., 10.7, and the highest in Preston, viz., 29.0 a thousand. Diphtheria caused 2 deaths in Manchester, and 6 in Salford.

London.—One thousand five hundred and sixty-seven deaths were registered during the week, including measles, 70; scarlet fever, 14; diphtheria, 27; whooping-cough, 31; typhus, 1; enteric fever, 8; diarrhœa and dysentery, 16. The deaths from all causes corresponded to an annual rate of 18.8 a thousand. Diseases of the respiratory organs caused 362 deaths; different forms of violence, 65; and 6 suicides were registered. In greater London 1,948 deaths were registered, corresponding to an annual rate of 18.0 a thousand of the population. In the "outer ring" the deaths included measles, 12; fever, 5; and whooping-cough, 7.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended February 23, in the 16 principal town districts of Ireland, was 27.0 a thousand of the population. The lowest rate was recorded in Wexford, viz., 8.6, and the highest in Lurgan, viz., 61.6 a thousand. In Dublin 210 deaths were registered, including whooping-cough, 3; enteric fever, 4; diarrhœa, 2; and measles, 5.

Scotland.—The deaths registered in 8 principal towns during the week ended February 23, corresponded to an annual rate of 21.2 a thousand

of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Perth, viz., 9.5 and the highest in Glasgow, viz., 26.2 a thousand. The aggregate number of deaths registered from all causes was 542, including measles, 22; scarlet fever, 2; diptheria, 14; whooping-cough, 31; fever, 4; and diarrhœa, 7.

Malta and Gozo.—Three hundred and ninety-seven deaths were registered during the month of December, 1888, including measles, 17; whooping-cough, 3; and diphtheria 3.

Netherlands.—The deaths registered in the principal cities of the Netherlands, having an aggregate population of 1,129,678, during the month of December, 1888, corresponded to an annual rate of 22.9 a thousand. The lowest rate was recorded in Arnhem, viz., 13.7, and the highest in Hertogenbosch, viz., 38.7. The deaths included enteric and typhus fevers, 9; scarlet fever, 4; measles, 72; whooping-cough, 29; diarrhœa and dysentery, 23; and cholera nostras, 1.

Port au Prince, Hayti.—The United States Consul-General transmits the following dispatch, under date of February 4, 1889, in reply to an inquiry by this Bureau relative to an alleged incorrect bill of health issued by that officer to the schooner "Winnie Lowry," which arrived at Wilmington, N. C., in December, 1888:

In reply to the observations of Quarantine-Physician Curtis, of the port of Wilmington, N. C., that the bill of health delivered from this consulate-general, November 24, 1888, to the schooner "Winnie Lowry" is, in his consideration, false, and calculated to throw discredit upon our consular service, I have to say that as reported in my despatch (No. 206) dated September 6, 1888, there were a few cases of yellow fever in this harbor; also, in my No. 208, of the same series, I report a low form of intermittent fever; and in my No. 209 I again refer to yellow fever pure and simple, and give my reasons for delivering a clean bill of health to the Dutch steamer "Prins Orange Nassau." There has been some mortality here from fevers—yellow and others—but there always is; yet, neither at present or then, any tendency towards an epidemic. A clean bill of health for the schooner "Winnie Lowry," bound to New York, was issued. It was never known here that there was yellow fever on board of such vessel while in the harbor, and is still doubted. The seaman shipped had been discharged from the hospital after having regained his health. The ship was bound in the season and for a port where she would daily find the atmosphere colder and colder. There could not be found then any excuse for doing otherwise than was done. I would respectfully advise, since it seems from years of experience here that at any moment yellow fever may appear, that according to paragraph 336, Consular Regulations of 1888, a physician be named as medical inspector to visit all vessels bound from this to any port in the United States, and thus having every detail constantly before him, he would be fully aware if only a slight suspicion of infection existed.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Palermo	Feb. 23	250,000	128	.....	.....	2	.....	.....	1	.....	.....	.....
Havre	Feb. 23	112,074	54	.....	.....	1	.....	.....	.....	1	.....	.....
Barmen	Feb. 23	109,000	39	.....	.....	.....	.....	.....	.....	.....	.....	1
Cadiz	Feb. 23	65,028	48	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	Jan. 30	5,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

Jacksonville, Fla.—In reply to an inquiry from this Bureau relative to a reported case of yellow fever at Jacksonville, Fla., Dr. J. Y. Porter writes, under date of February 21, 1889, that there is no truth in the rumor, the case being clearly one of remittent fever. "You can rest assured that if there is any suspicion of any disease of the nature of yellow fever prevailing here, I would be likely to hear of it, as I am in perfect accord with all the authorities, and they have no object in concealing it from me."

Tampa and Plant City, Fla.—Dr. J. L. Posey, sanitary inspector Marine-Hospital Service, has made the following reports, from Green Cove Springs, under date of March 9, 1889:

TAMPA, FLA.

SIR: In obedience to your letter of instructions I have inspected the city of Tampa, Fla. This is one of the oldest towns of the State, and is the county seat of Hillsboro' County; it covers an area of three square miles, and has an estimated population of 8,000. The recent incorporation of Ybor City, inhabited almost exclusively by a Cuban population, engaged in the manufacture of cigars, has added largely to the old city in area and value. The general sanitary condition of this city admits of much improvement, and although the present system of removal of excreta is to be commended, still its deposition in a large trench a half mile from the city on the shore of the old bay, is not unattended with danger of contaminating the atmosphere of the city. The desiccation and complete incineration of human excreta and garbage, by means of a suitably constructed crematorium, is, in my opinion, the only proper method to adopt in tropical towns and cities. After consulting with the mayor of Tampa, I learned that under the supervision of Dr. John P. Wall, acting for the Marine-Hospital Service, all the infected houses had been thoroughly disinfected and fumigated, and all infected bedding destroyed. I regret that Doctor Wall was absent at the time of my visit, as he is thoroughly conversant with all that has been done, and all the facts in connection with the origin and prevalence of the fever in Tampa.

The close communication with Havana by the Plant Line of steamers, and the influx of a large Cuban population, render it a point very much exposed to the introduction of the fever, but with the present safeguards and thorough sanitary methods in use by the owners of this line, I believe the highest degree of protection is given, and the danger of importing the infection of yellow fever through this line reduced to its minimum. I fully coincide with Dr. Wall, in the view that the extensive coast line of Florida renders it an easy matter for the smuggler of the products of our tropical neighbors to introduce with them the infectious material of a disease of which they have little dread, but whose presence in Florida has caused such wide-spread panic among its people, and inestimable loss to commerce. The prolonged duration of the disease in Tampa must give us some reason to fear that the "materies morbi" has found a soil and climate congenial to its nature and longevity. May not repeated importations of the germ of this disease, through the illicit channels of commerce, into a city whose climate and geographical position are similar to those of Havana, finally become domesticated, take up its abode, in fact assume an endemic character? It has long been held and fondly cherished by the "cracker," as also by his more intelligent countrymen, that the germs of yellow fever would not spread or propagate beneath the balsamic pines or on the surface of the snowy sands of "Pasqua Florida." This dear illusive theory has been, by the experiences of the last epidemic, rudely crushed by the stern facts which are presented to them, by the more or less rapid spread of this subtle atmospheric poison even in the high sandy pine hills of genial Florida. Nothing but the most rigorous and constant vigilance will afford Tampa any security against the introduction of this disease by the clandestine traffic which is yearly increasing, and is fostered by the facilities offered the wary smuggler by the many bays and inlets of the Florida coast. The immunity of Tampa in future from this disease will afford that degree of security which alone can restore the confidence of the people in the ability of sanitarians and public health officers to exclude this "alien infection" forevermore from our shores. The duty of protecting the Florida coast against the invasion of this disease should, in my opinion, devolve upon the National Government, which alone is able and competent to successfully attain this much-desired end; and thus manifest that wise policy and paternal solicitude for her people, in attaining one of the highest objects of a humane Government, the health of the nation.

Very respectfully,

J. L. POSEY, M. D.,
U. S. Sanitary Inspector, Marine-Hospital Service.

To Surgeon-General JOHN B. HAMILTON.

PLANT CITY.

SIR: In obedience to your letter of instructions of December 28, 1888, I have made a thorough inspection of Plant City, and, after an interview with the mayor and health officer thereof, was informed that a complete system of disinfection and fumigation had been carried out by Dr. J. P. Wall, of Tampa, and that there remained nothing further to be desired in that respect. The town comprises a half hundred houses, and a population of about 300 souls, and is 22 miles east of Tampa, and

is connected with the principal towns of Florida by two lines of rail road. The character of the soil is a dark, sandy loam, and the country is what is known as "low, flat, pine woods," and subject to inundation when there are heavy rains. Contiguous to the hamlet, on the north and south, are two marshy areas, known as Alafia and Turkey Creeks, Hillsboro' and Blackwater, all of which are sluggish bodies of water, filled with rank vegetation, and must, naturally, contribute to render the atmosphere highly malarious. The present sanitary condition of this town is not good, and the local authorities are unable to place it in such a state as would render the recurrence of yellow fever improbable in an epidemic form. From the published statement made by the authorities of the town, it appears that the fever was introduced into Plant City by refugees from Tampa in the early part of October, 1887. Cases of yellow fever soon occurred among these families, and on the 14th of November, 1887, Doctor McCall died. The disease slowly invaded all the houses in that part of the town, and prevailed until the 18th, of August, 1888. During that period there were twenty-one deaths, the greater number being in June and July, 1888. It will be seen that from its first appearance, the disease, though slow in its progress, was sufficiently virulent to cause deaths in December, 1887, and January and February, 1888, and manifested its vitality during a period of nine months. I have been unable to obtain a correct statement of the number of cases, but the death rate does not appear to be greater than 10 per cent. The last case in or near the town was discharged by the medical attendant on the 18th of August, 1888, since which date no other cases have been reported. The history of this epidemic proves fully that the germs of the fever hibernated there, and that the mild winter did not effect their vitality, and that there is a marked tendency for the infectious principle of this subtle poison to become endemic at Plant City. It would be strange if, with the fostering climatic conditions, there should not occur during the coming summer some cases of yellow fever at this place to justify the opinion that the specific poison of this disease has not been eradicated or destroyed at this point.

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Very respectfully,

J. L. POSEY, M. D.,

U. S. Sanitary Inspector, Marine-Hospital Service.

To Surgeon-General JOHN B. HAMILTON.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Mar. 9	1,557,348	877	.....	.....	.....	.....	.....	.....	2	54	50	21	24
Philadelphia, Pa.	Mar. 9	1,040,246	435	.....	.....	.....	.....	.....	.....	21	8	8	.....	2
Chicago, Ill	Mar. 9	830,000	295	.....	.....	.....	.....	.....	.....	2	3	26	8	2
Brooklyn, N. Y.	Mar. 9	814,305	398	.....	.....	.....	.....	.....	.....	2	6	26	13	8
Baltimore, Md.	Mar. 9	500,343	151	.....	.....	.....	.....	.....	.....	1	3	4	.....	1
St. Louis, Mo.	Mar. 9	440,000	172	.....	.....	.....	.....	.....	.....	3	.....	11	5	3
Cincinnati, Ohio	Mar. 9	255,139	119	.....	.....	.....	.....	.....	.....	3	.....	10	.....	.....
New Orleans, La.	Mar. 2	254,000	114	.....	.....	.....	.....	.....	.....	1	.....	5	.....	.....
Detroit, Mich.	Mar. 9	250,000	63	.....	.....	.....	.....	.....	.....	2	2	2	.....	.....
Cleveland, Ohio.	Feb. 16	235,000	66	.....	.....	.....	.....	.....	.....	5	2	1	.....	.....
Cleveland, Ohio.	Feb. 23	235,000	76	.....	.....	.....	.....	.....	.....	1	1	4	.....	.....
San Francisco, Cal.	Mar. 1	230,000	129	.....	.....	.....	.....	.....	.....	3	.....	2	.....	.....
Pittsburgh, Pa.	Mar. 9	230,000	96	.....	.....	.....	.....	.....	.....	2	2	2	7	3
Washington, D. C.	Mar. 9	225,000	87	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2
Milwaukee, Wis.	Mar. 9	210,000	69	.....	.....	.....	.....	.....	.....	1	1	3	1	.....
Saint Paul, Minn.	Feb. 23	180,000	37	.....	.....	.....	.....	.....	.....	2	3	2	1	.....
Minneapolis, Minn.	Mar. 9	180,000	48	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....
Providence, R. I.	Mar. 9	127,000	41	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1
Rochester, N. Y.	Mar. 9	120,000	41	.....	.....	.....	.....	.....	.....	1	.....	2	.....	1
Denver, Colo.	Mar. 8	100,000	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond, Va.	Mar. 9	100,000	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toledo, Ohio.	Mar. 9	80,000	19	.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....
Camden, N. J.	Feb. 28	70,000	32	.....	.....	.....	.....	.....	.....	2	1	1	.....	.....
Nashville, Tenn.	Mar. 9	65,153	17	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Fall River, Mass.	Mar. 9	65,000	28	.....	.....	.....	.....	.....	.....	1	2	1	.....	.....
Charleston, S. C.	Mar. 9	60,145	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynn, Mass	Mar. 9	50,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H	Mar. 2	42,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Mar. 9	40,000	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa.	Mar. 2	35,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa.	Mar. 9	33,715	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
East Saginaw, Mich.	Mar. 9	33,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Burlington, Iowa	Feb. 22	30,166	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	Mar. 9	30,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Mar. 9	26,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Mar. 9	25,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Mar. 7	22,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Mar. 2	21,553	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Mar. 9	21,553	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa.	Mar. 9	16,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Mar. 9	15,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract / No. 12. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., March 22, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended March 22, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended March 2, corresponded to an annual rate of 19.7 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz., 14.6, and the highest in Preston, viz., 33.6 a thousand. Diphtheria caused 3 deaths in Manchester, and 4 in Salford, and 2 in Oldham.

London.—One thousand four hundred and seventy-two deaths were registered during the week, including measles, 67; scarlet fever, 12; diphtheria, 25; whooping-cough, 31; typhus, 1; enteric fever, 6; diarrhœa and dysentery, 18. The deaths from all causes corresponded to an annual rate of 17.6 a thousand. Diseases of the respiratory organs caused 362 deaths; different forms of violence, 57; and 9 suicides were registered. In greater London 1,857 deaths were registered corresponding to an annual rate of 17.2 a thousand of the population. In the "outer ring" the deaths included measles, 7; diphtheria, 6; and whooping-cough, 11.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended March 2, in the 16 principal town districts of Ireland, was 24.9 a thousand of the population. The lowest rate was recorded in Wexford, viz., 4.3, and the highest in Londonderry, viz., 37.4 a thousand. In Dublin 172 deaths were registered, including whooping-cough, 4; enteric fever, 7; measles, 2; and typhus, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended March 2, corresponded to an annual rate of 22.3 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Leith, viz., 15.0 and the highest in Glasgow, viz., 27.8 a thousand. The aggregate number of deaths registered from all causes was 571, including measles, 41; scarlet fever, 4; diphtheria, 10; whooping-cough, 24; fever, 2; and diarrhœa, 5.

Malta and Gozo.—Five hundred and twenty-three deaths were registered during the month of January, 1889, including small-pox, 4; measles, 46; whooping-cough, 11; diphtheria 11; enteric fever, 1; and dysentery, 3.

Rio de Janeiro, Brazil.—Yellow Fever.—The following dispatch has been received from the United States Consul General, under date of February 13, 1889:

Never in the history of this city has there been known at this season such an epidemic of yellow fever as is now prevailing here. The number of deaths in the month of January was 1,713, the largest ever known in one month; yet the rate, as shown by the reports up to the 10th of February (the last publication), makes a large increase in the death rate, which, if continued through the month, will show the deaths in February to be 2,108, which is more than double the number of deaths for the same month last year, which was 970.

The weather is intensely hot and dry. There is in many localities of the city great suffering from want of water, and unless rain should come soon to reduce the temperature and increase the water supply the worst has as yet not been realized.

Buenos Ayres, Argentine Republic.—One thousand one hundred and thirty-eight deaths were registered during the month of December, 1888, including small-pox, 2; enteric fever, 31; scarlet fever, 73; and diphtheria, 11. Scarlet fever and diphtheria prevail.

Marseilles, France.—Nine hundred and seventy-three deaths were registered during the month of February, 1889. Population, 375,378. The deaths included small-pox, 7; enteric fever, 11; diphtheria, 44; measles, 28; whooping-cough, 4; diarrhœa, 50. Cold, windy weather during the month increased the death rate from pulmonary diseases, but the city is free from epidemic and all contagious diseases except a little small-pox.

Palermo, Italy.—Four deaths from small-pox were registered during the month of January, 1889.

Guaymas, Mexico.—Twenty-four deaths were registered during the month of February, 1889. No epidemical sickness. Sanitary condition good.

Maceio, Brazil.—Eighty-five deaths were registered during the month

of January, 1889, in a population of 17,000, including 55 from small-pox.

Catania, Italy.—Two hundred and seventy-seven deaths were registered during the month of February, 1889, including 3 from small-pox. The sanitary condition of the city was good.

Santiago de Cuba, February 20, 1889.—Small-pox cases are reported in the town and in some of the surrounding villages, where it has become epidemic. From the 1st of January to date there were 24 deaths from yellow fever.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Feb. 23	2,260,945	.....	.....	.....	1	.....	15	4	45	46	12
Paris	Mar. 2	2,260,945	1,027	.....	.....	6	.....	16	7	37	31	2
Glasgow	Feb. 23	545,678	266	.....	.....	.....	.....	2	.....	6	.....	.....
Glasgow	Mar. 2	545,678	282	.....	.....	.....	.....	2	4	8	.....	.....
Warsaw	Feb. 16	444,814	207	.....	.....	3	.....	.....	6	7	.....	.....
Calcutta	Jan. 19	433,219	236	33	.....	.....	.....	.....	.....	1	1	.....
Calcutta	Jan. 26	433,219	259	51	.....	1	.....	.....	.....	.....	3	.....
Rome	Jan. 26	401,044	203	.....	.....	4	.....	1	1	2	.....	.....
Amsterdam	Feb. 23	399,051	189	.....	.....	.....	.....	1	.....	4	.....	.....
Amsterdam	Mar. 2	399,051	187	.....	.....	.....	.....	3	1	7	.....	.....
Copenhagen	Feb. 16	307,000	131	.....	.....	.....	.....	2	3	4	.....	.....
Copenhagen	Feb. 23	307,000	115	.....	.....	.....	.....	1	3	3	.....	.....
Munich	Feb. 2	281,000	175	.....	.....	.....	.....	.....	4	3	.....	.....
Munich	Feb. 9	281,000	151	.....	.....	.....	.....	.....	2	13	.....	.....
Munich	Feb. 16	281,000	159	.....	.....	.....	.....	.....	1	9	.....	.....
Palermo	Feb. 16	250,000	126	.....	.....	.....	.....	.....	1	6	.....	.....
Palermo	Mar. 2	250,000	98	.....	.....	.....	.....	.....	3	3	.....	.....
Genoa	Feb. 23	179,891	91	.....	.....	2	.....	.....	.....	1	.....	.....
Trinidad	Jan. 26	178,270	39	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toronto	Mar. 2	170,000	43	.....	.....	.....	.....	1	.....	3	.....	.....
Toronto	Mar. 9	170,000	45	.....	.....	.....	.....	2	.....	2	.....	.....
Trieste	Feb. 16	154,500	102	.....	.....	2	.....	.....	.....	.....	.....	.....
Trieste	Feb. 23	154,500	98	.....	.....	2	.....	.....	.....	.....	.....	.....
Stuttgart	Feb. 23	125,510	53	.....	.....	.....	.....	.....	1	2	.....	.....
Stuttgart	Mar. 2	125,510	53	.....	.....	.....	.....	.....	1	6	.....	.....
Leghorn	Feb. 24	102,893	39	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leghorn	Mar. 3	102,893	41	.....	.....	.....	.....	.....	.....	.....	.....	.....
Havre	Mar. 2	112,074	66	.....	.....	1	.....	.....	1	2	.....	.....
Pernambuco	Feb. 12	110,000	93	.....	1	.....	1	2	1	.....	.....	.....
Mayence	Feb. 16	65,802	30	.....	.....	.....	.....	.....	.....	1	.....	.....
Mayence	Feb. 23	65,802	25	.....	.....	.....	.....	.....	.....	3	.....	.....
Merida	Feb. 21	47,448	53	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Feb. 28	47,448	44	.....	.....	.....	.....	.....	.....	.....	.....	.....
Maracaibo	Feb. 23	40,000	17	.....	.....	.....	.....	2	.....	.....	.....	.....
Gibraltar	Feb. 24	23,581	13	.....	.....	.....	.....	.....	.....	1	.....	.....
Kingston, Can	Mar. 8	17,300	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Feb. 23	7,428	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Mar. 2	7,428	5	.....	.....	.....	.....	.....	.....	.....	.....	.....

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Mar. 16	1,558,320	363	.....	.....	.....	.....	.....	.....	6	46	47	20	24
Philadelphia, Pa.	Mar. 16	1,040,245	405	.....	.....	.....	.....	.....	.....	8	8	6	1	1
Chicago, Ill	Mar. 16	830,000	271	.....	.....	.....	.....	.....	.....	4	5	31	6	5
Brooklyn, N. Y.	Mar. 16	814,505	411	.....	.....	.....	.....	.....	.....	1	7	21	18	12
St. Louis, Mo.	Mar. 16	440,000	165	.....	.....	.....	.....	.....	.....	2	1	8	12	2
San Francisco, Cal.	Mar. 8	330,000	124	.....	.....	.....	.....	.....	.....	3	.....	3	.....	.....
Cincinnati, Ohio	Mar. 16	255,139	141	.....	.....	.....	.....	.....	.....	2	.....	5	.....	.....
New Orleans, La.	Mar. 9	254,000	90	.....	.....	1	.....	.....	.....	.....	.....	1	.....	1
Detroit, Mich.	Mar. 16	250,000	69	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1
Washington, D. C.	Mar. 16	225,000	136	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	4
Pittsburgh, Pa.	Mar. 16	.....	90	.....	.....	.....	.....	.....	.....	1	2	5	1	3
Louisville, Ky.	Mar. 16	200,000	65	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	4
Newark, N. J.	Mar. 12	180,245	91	.....	.....	.....	.....	.....	.....	3	.....	9	.....	.....
Kansas City, Mo.	Mar. 16	180,000	38	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Minneapolis, Minn.	Mar. 16	180,000	53	.....	.....	.....	.....	.....	.....	1	1	5	.....	.....
Providence, R. I.	Mar. 16	127,000	53	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Rochester, N. Y.	Mar. 16	120,000	34	.....	.....	.....	.....	.....	.....	1	.....	2	1	.....
Richmond, Va.	Mar. 16	100,000	43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Denver, Colo.	Mar. 15	100,000	25	.....	.....	.....	.....	.....	.....	.....	1	4	.....	.....
Toledo, Ohio	Mar. 15	80,000	27	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Camden, N. J.	Mar. 7	70,000	25	.....	.....	.....	.....	.....	.....	4	.....	1	.....	.....
Nashville, Tenn.	Mar. 16	65,153	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	Mar. 16	65,000	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	Mar. 16	60,145	34	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Lynn, Mass	Mar. 16	50,000	20	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Manchester, N. H.	Mar. 9	42,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Mar. 16	40,000	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Council Bluffs, Iowa	Mar. 9	35,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	Mar. 16	33,715	10	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
East Saginaw, Mich.	Mar. 16	33,000	16	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Auburn, N. Y.	Mar. 16	26,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Mar. 16	25,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Mar. 14	22,000	10	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa	Mar. 16	16,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 13. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., March 29, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended March 29, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended March 9, corresponded to an annual rate of 21.0 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Derby, viz., 14.3, and the highest in Blackburn, viz., 31.0 a thousand. Diphtheria caused 3 deaths in Manchester and 2 in Sheffield.

London.—One thousand six hundred and thirty-seven deaths were registered during the week, including measles, 77; scarlet fever, 16; diphtheria, 20; whooping-cough, 29; enteric fever, 4; diarrhœa and dysentery, 15. The deaths from all causes corresponded to an annual rate of 19.6 a thousand. Diseases of the respiratory organs caused 402 deaths; different forms of violence, 52; and 3 suicides were registered. In greater London 2,023 deaths were registered, corresponding to an annual rate of 18.7 a thousand of the population. In the "outer ring" the deaths included measles, 6; diphtheria, 4; fever, 5; and whooping-cough, 4.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended March 9, in the 16 principal town districts of Ireland, was 29.9 a thousand of the population. The lowest rate was recorded in Armagh, viz., 5.2, and the highest in Cork, viz., 33.1 a thousand. In Dublin 226 deaths were registered, including whooping-cough, 1; scarlet fever, 1; enteric fever, 9; measles, 3; and typhus, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended March 9, corresponded to an annual rate of 23.5 a thousand of

the population, which is estimated at 1,314,274. The lowest mortality was recorded in Aberdeen, viz., 16.7 and the highest in Perth, viz., 28.5 a thousand. The aggregate number of deaths registered from all causes was 600, including measles, 26; scarlet fever, 1; diphtheria, 11; whooping-cough, 27; fever, 2; and diarrhœa, 9.

Netherlands.—The deaths registered in the principal cities of the Netherlands, having an aggregate population of 1,129,678, during the month of January, 1889, corresponded to an annual rate of 25.6 a thousand. The lowest rate was recorded in Maestricht, viz., 17.4; and the highest in Hertogenbosch, viz., 33. The deaths included enteric and typhus fevers, 6; scarlet fever, 2; measles, 85; croup, 26; whooping-cough, 44; diphtheria, 22; and diarrhœa and dysentery, 27.

Barbadoes, W. I.—March 2, 1889: Health of Island good. No system of registration.

Cardenas, Cuba.—March 15, 1889: No sickness. Cool and rainy.

San Juan, P. R.—February 28, 1889: Seventy-one deaths were registered during the month of February, including 1 from enteric fever. There were three cases of yellow fever, but no deaths from that disease.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Mar. 9	2,260,945	1,111	.....	.....	3	.....	6	4	47	34	4
Glasgow	Mar. 9	545,678	284	.....	.....	.....	.....	1	1	6	.....	.....
Warsaw	Feb. 23	444,814	220	.....	.....	6	.....	.....	1	4	.....	.....
Warsaw	Mar. 2	444,814	242	.....	.....	6	.....	.....	2	13	.....	.....
Calcutta	Feb. 2	433,219	217	36	.....	1	.....	.....	.....	.....	1	.....
Rio de Janerio	Feb. 10	309,000	500	.....	120	2	35	10	.....	.....	.....	.....
Palermo	Mar. 9	250,000	99	.....	.....	1	.....	.....	1	1	.....	.....
Belfast	Mar. 2	229,622	110	.....	.....	.....	.....	7	1	3	.....	.....
Belfast	Mar. 9	229,222	123	.....	.....	.....	1	4	.....	.....	.....	.....
Genoa	Mar. 9	179,900	102	.....	.....	1	.....	.....	.....	2	.....	.....
Toronto	Mar. 16	170,000	54	.....	.....	.....	.....	3	.....	3	.....	.....
Trieste	Mar. 2	154,500	79	.....	.....	1	.....	.....	.....	1	1	.....
Stuttgart	Mar. 9	125,510	41	.....	.....	.....	.....	.....	1	1	.....	.....
Havre	Mar. 9	112,074	64	.....	.....	1	.....	2	.....	.....	.....	.....
Pernambuco	Feb. 19	110,000	98	.....	1	.....	1	1	2	.....	.....	.....
Pernambuco	Feb. 26	110,000	97	.....	3	.....	1	2	1	.....	.....	.....
Barmen	Mar. 2	109,000	50	.....	.....	.....	.....	.....	.....	2	1	.....
Barmen	Mar. 9	109,000	53	.....	.....	.....	.....	.....	1	1	1	1
Leghorn	Mar. 11	102,893	32	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Mar. 2	65,802	24	.....	.....	.....	.....	.....	.....	2	.....	.....
Cadiz	Mar. 2	65,028	63	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Mar. 9	65,028	59	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Mar. 10	30,000	86	.....	5	.....	.....	38	.....	.....	6	.....
Gibraltar	Mar. 3	23,631	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Mar. 15	17,300	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antigua	Mar. 10	15,847	16	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Feb. 15	13,500	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Feb. 22	13,500	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	Mar. 9	13,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....

The following is a copy of the act to create and establish a State board of health in Florida:

Be it enacted by the Legislature of the State of Florida:

SECTION 1. That the governor shall, within twenty days after the passage of this act, appoint three discreet citizens of the State of Florida, who shall be confirmed by the Senate, and who shall, after taking and subscribing an oath before some person competent to administer oaths, faithfully to perform the duties of their offices, constitute the State board of health.

SEC. 2. It shall be the duty of members of said board to convene in the city of Tallahassee, upon a day to be named by the governor, not more than ten days from the date of their appointment. It shall be the duty of said board, at their first meeting, to elect one of their number as president of said board. At the same meeting it shall be the duty of said board to designate and employ a physician, who shall be an expert in the diagnosis of yellow fever, small-pox, cholera, and other infectious diseases, and who must be a person of recognized ability and skilled in hygiene and sanitary science and a graduate physician of a recognized and reputable medical college, which said person shall be known as the State health officer. The State health officer shall be the executive officer of the board and secretary of the same, and shall hold the office until removed by the board for just cause.

SEC. 3. The term of office of each member of the board of health shall be four years from the date of his appointment, or until his successor is appointed and qualified, and the term of employment of State health officer shall be for four years from the date of his appointment, or until his successor is appointed and qualified: *Provided*, That should any member of the said board be and remain absent from the State for ten days after any disease has been declared epidemic, the governor may declare his office vacant and proceed to fill the same by appointment, and should the health officer be and remain absent from the State for five days after his attention has been called to the presence of any disease in the State, the board of health may declare the office vacant and proceed to fill the same by designation and employment of a suitable person to perform the duties thereof.

SEC. 4. It shall be the duty of every practicing or licensed physician in the State of Florida to report immediately to the president of the board of health, by telegram or in the most expeditious manner, every case of yellow fever, small-pox, or cholera that comes within his practice, such telegram to be paid for out of the funds to be provided for the expenses of said board of health.

SEC. 5. Any practicing or licensed physician who shall fail to report to said president any such case, in the manner provided in the preceding section, shall be guilty of a misdemeanor, and, upon conviction thereof, shall be fined in a sum of not less than $100 nor more than $1,000, or by imprisonment in the county jail for not less than three nor more than six months.

SEC. 6. Any person or persons who shall falsely or maliciously disseminate or spread rumors or reports concerning the existence of any infectious or contagious disease, shall be guilty of a misdemeanor, and,

upon conviction thereof, shall be punished as provided by section 5 of this act.

SEC. 7. It shall be the duty of the several judges of the circuit courts of this State to give in charge to the grand juries of their respective courts sections 4, 5, and 6 of this act at each term thereof, and it shall be the duty of the grand juries of the said several courts specially to investigate in their respective counties the offenses therein specified, and to present impartially all offenders against the same.

SEC. 8. In the several counties of this State where county criminal courts of record exist, or may hereafter be established, it shall be the duty of the county solicitor of the said several courts to present and prosecute all offenders under sections 5 and 6 of this act.

SEC. 9. It shall be the duty of the president of the board of health, immediately upon the receipt of information that there is any case of yellow fever, small-pox, or cholera in any portion of this State, to order the State health officer by telegram, if he is not at hand, to proceed immediately to said place, and there to investigate the said reported case or cases of yellow fever, small-pox, or cholera, and to report to the said president by telegram the results of his said investigation; and said State health officer shall have power, and it shall be his duty, to declare said infected point to be in quarantine, and to place any and all such restrictions upon ingress or egress thereat as, in his judgment, shall be necessary to prevent a spread of the disease from the infected locality; and it shall be the duty of the said State health officer, when he shall have declared any city, town, or other place to be in quarantine to so control the population of said city, town, or other place, and make such disposition of the same as shall, in his judgment, best protect that population, and at the same time prevent a spread of the infection among the same. The sheriffs and constables of the several counties of this State, and the police officers of all the cities and towns of this State shall be under the control of the said State health officer, to enforce and carry out any and all quarantine regulations that he may prescribe, which said regulations shall be immediately published in the most practicable manner in the several counties, cities, towns, or other places where quarantine may be established; and said State health officer shall make immediate report of his actings and doings in the premises to the president of the board of health, and from time to time, so long as quarantine shall continue.

SEC. 10. It shall be the duty of the governor of this State, whenever called upon by the State health officer so to do, to furnish the said officer with all requisite means to enforce whatever quarantine regulations it may be necessary, in his judgment, to prescribe, including such armed force from the militia of the State as, in the judgment of the governor, may be required, upon information furnished by said officer.

SEC. 11. The board of health shall have power, and it shall be their duty, at all times to impose upon all railway and navigation companies, and upon all individuals who may own or operate steamships or other vessels plying between any of the West Indian, South American, or any other foreign ports and the ports of the State of Florida, such restrictions and regulations as to inspection, quarantine, and sanitary rules as, in their judgment, may be necessary to protect the health of the people of this State, and which may not be in conflict with the acts of Congress already passed, or that may hereafter be passed, and do not amount to an absolute interruption of commerce with said foreign ports: *Provided*, That whenever any case of yellow fever, small-pox, cholera,

or other infectious disease shall appear, or be developed among the passengers, officers, or crew of any such steamship or other vessel, said steamship or other vessel shall be ordered in quarantine for such time and under such regulations as may be prescribed by said board of health: *Provided further*, That should said board of health at any time be convinced that yellow fever, small-pox, cholera, or other infectious disease exists in any foreign port in such form that the landing of any steamship or other vessel, hailing from said infected foreign port, at any of the ports of Florida, will put in peril the health of the people of said State, it shall be the duty of said board to put all and any such steamships or vessels, their crew, passengers, and cargo in quarantine for such time and under such rules and regulations as may be prescribed by said board of health: *Provided further*, That said board of health shall charge and receive from such vessels undergoing inspection or sanitation, as provided in this section, such fee or fees as said board may prescribe.

SEC. 12. The State Board of Health shall have general supervision of the public health of the State of Florida, and shall have power to make, promulgate and enforce such rules and regulations as may be necessary for the preservation of the same. It shall be the duty of the State health officer, between the first of November and the first of May, of each and every year, and oftener, if deemed necessary by the board, to visit all the cities and towns, or other points where two or more railroads meet, in the State of Florida, which, in the judgment of the board, it may be necessary for him to inspect, and to thoroughly investigate the sanitary condition of said cities or towns; and he shall have the power, and it shall be his duty, to condemn in any of said cities or towns, any sidewalks, pavements, buildings, wharves, or other things that in his judgment shall be likely to produce or cause the spread of epidemic diseases; and he shall give notice to the mayor and council of such city or town, or other authority, to repair, remove, cleanse, or remedy the same within thirty-six hours, and if the same shall not be done, as so required, it shall be his duty to have the same done himself, and the expense thereof shall be paid out of the health fund hereinafter provided and be afterwards assessed as a tax upon the assessable property of said city or town, to be assessed by the county assessor upon notification by the health officer of the amount, and collected by the county collector at the next annual assessment and collection thereafter, said amount so realized to be replaced in the health fund of the State by the proper authorities; *Provided*, A list and memorandum of property to be condemned shall be made and valuation placed upon the same by three disinterested freeholders, one to be selected by said health officer, one to be selected by the owner of the property or his agent, and the third to be selected by the two freeholders already selected, before being condemned or destroyed, and the value of any private property that may be condemned and ordered to be destroyed by the health officer, shall be paid to the owner thereof out of any funds provided and appropriated for the expenses of the State board of health, upon the certificate of said health officer that said property was so destroyed, approved by the board of health and endorsed by the president of the board.

SEC. 13. It shall be the duty of said State board of health, at their first organization, herein provided for, to formulate such rules and regulations for the preservation of the public health as, in their judgment, they may deem necessary, and to meet upon the first Monday in

May, A. D. 1890, and upon the corresponding day annually thereafter, to formulate such additional rules and regulations for the preservation of the public health as their experience may suggest; and they shall have the same published in such place and in such manner as they may deem best to give greatest publicity to the same, and it shall be the duty of the State health officer to attend all meetings of said board of health, and act as secretary of the same. The president of said board of health shall have power to call meetings of said board at any time and at such place as he may designate, to take measures for the public safety.

SEC. 14. The State board of health shall have the power, after close personal inspection, to modify or abrogate any or all quarantine regulations after they may be established by said State health officer. The State board of health shall have the power, by and with consent of the governor, when the occasion demands it, to call upon the general government for such aid as the necessities arising out of any epidemic may require.

SEC. 15. Any person who violates, disobeys, omits, neglects or refuses to comply with any quarantine regulations which may be established by the State health officer, or any of the rules and regulations which may be adopted by the State board of health, as hereinbefore provided, that may be duly promulgated by said State health officer or the said board of health, shall be guilty of a misdemeanor, and upon conviction thereof shall be fined in a sum not less than $100 nor more than $1,000, or by imprisonment in the county jail for not less than one nor more than six months.

SEC. 16. The State health officer shall receive a salary of $3,000 a year, to be paid quarterly, upon his requisition, approved by the president of the board of health, out of the fund hereinafter provided, together with his actual traveling expenses, while engaged in the discharge of his duties as State health officer. The members of the State board of health shall receive a per diem of $6 for each day of actual session, with mileage to and from their homes to the place of meeting, by the nearest and most practicable route, at the rate of 10 cents per mile.

SEC. 17. There shall be designated and employed, by the State board of health an assistant State health officer, who must also be a physician of experience and skilled in the diagnosis of infectious and contagious diseases, and who shall be subject to the orders and instructions of the State health officer, and, in case of sickness or disability of the State health officer, he shall succeed to the duties of the office for the time being of the State health officer. The assistant health officer shall receive $15 per diem for each day that he is engaged in actual service under the direction of the State health officer, and 5 cents per mile for every mile traveled in the performance of such service, and shall hold appointment until removed for cause by the State board of health.

SEC. 18. The State health officer before entering upon his duties shall take before some person competent to administer oaths, an oath to faithfully perform the duties of his office, and enter into a bond, with good and sufficient securities, in the sum of $10,000, payable to the president of the board of health, said bond to be approved by the said president, conditioned for the faithful discharge of his duties. Said bond to be prosecuted by the attorney-general for any neglect of duty or abuse of power herein conferred, and if said bond should be for-

feited, all such amounts collected from such prosecution shall be placed to the credit of the before named health fund, by said president of the board.

SEC. 19. All expenditures of the board of health shall be certified by the president of the board, and he shall make an annual report to the governor of all such expenditures, in a clear and concise statement, together with any special observations, recommendations or facts that he may present, that would be conducive to the health and sanitary conditions of the State, and such annual statements shall finally be submitted by the governor to the State legislature when in regular session convened, and shall be published like other reports of State officers, and the president of said board shall hold for inspection properly certified vouchers for such expenditures, a copy of which shall be furnished the comptroller, who shall not draw his warrant on the treasurer without the proper certificates and vouchers.

SEC. 20. That there shall be annually levied and collected upon the assessable property of the State a tax of not more than half a mill, the revenue derived from which assessment and collection shall constitute a special fund to be used for public health purposes of the State.

SEC. 21. The State board of health shall have general supervision and control over such county boards of health as the legislature may establish.

SEC. 22. That this act shall take effect from and after its approval by the governor.

SEC. 23. That all laws and parts of laws in conflict with the provisions hereof be, and the same are hereby, repealed.

Approved February 20, 1889.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Mar. 23	1,559,092	822	.....	.....	.....	.....	.....	.....	5	59	42	16	17
Philadelphia, Pa.	Mar. 23	1,040,245	412	.....	.....	.....	.....	.....	.....	14	11	5	.....	2
Chicago, Ill	Mar. 23	830,000	279	.....	.....	.....	.....	.....	.....	9	2	26	5	1
Brooklyn, N. Y.	Mar. 23	814,505	352	.....	.....	.....	.....	.....	.....	3	9	21	10	14
Baltimore, Md.	Mar. 16	500,343	175	.....	.....	.....	.....	.....	.....	1	2	4	.....	.....
Baltimore, Md	Mar. 23	500,343	160	.....	.....	.....	.....	.....	.....	4	3	2	1	2
San Francisco, Cal.	Mar. 15	330,000	121	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Cincinnati, Ohio	Mar. 23	255,139	103	.....	.....	.....	.....	.....	.....	2	1	3	.....	2
New Orleans, La.	Mar. 16	254,000	119	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	1
Pittsburgh, Pa.	Mar. 23	230,000	83	.....	.....	.....	.....	.....	.....	3	.....	2	3	3
Washington, D. C.	Mar. 23	225,000	110	.....	.....	.....	.....	1	.....	1	1	.....	.....	2
Milwaukee, Wis.	Mar. 23	210,000	52	.....	.....	.....	.....	.....	.....	.....	5	1	1	1
Newark, N. J.	Mar. 19	180,145	107	.....	.....	.....	.....	.....	.....	2	1	1	.....	2
Minneapolis, Minn.	Mar. 23	180,000	52	.....	.....	.....	.....	.....	.....	1	1	4	.....	.....
Kansas City, Mo.	Mar. 23	180,000	30	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1
Saint Paul, Minn.	Mar. 16	180,000	31	.....	.....	.....	.....	.....	.....	1	3	4	.....	.....
Saint Paul, Minn.	Mar. 23	180,000	41	.....	.....	.....	.....	.....	.....	1	1	5	.....	.....
Providence, R. I.	Mar. 23	127,000	49	.....	.....	.....	.....	.....	.....	1	.....	2	.....	3
Rochester, N. Y.	Mar. 23	120,000	55	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	2
Denver, Colo.	Mar. 22	100,000	29	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....
Nashville, Tenn.	Mar. 23	65,153	20	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Fall River, Mass.	Mar. 23	65,000	30	.....	.....	.....	.....	.....	.....	.....	1	.....	1	.....
Toledo, Ohio	Mar. 22	51,000	27	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Lynn, Mass	Mar. 23	50,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H	Mar. 16	42,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Mar. 23	42,048	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Mar. 8	40,000	20	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Galveston, Tex.	Mar. 15	40,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	Mar. 16	35,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Saginaw, Mich.	Mar. 23	33,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	Mar. 16	30,000	9	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Auburn, N. Y.	Mar. 23	26,000	6	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Haverhill, Mass.	Mar. 23	25,000	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Newport, R. I.	Mar. 21	22,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Mar. 16	21,553	3	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Newton, Mass.	Mar. 23	21,553	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Mar. 16	15,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 14. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., April 5, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended April 5, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended March 16, corresponded to an annual rate of 21.3 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Sunderland, viz., 14.0, and the highest in Blackburn, viz., 33.1 a thousand. Diphtheria caused 3 deaths in Manchester, 2 in Salford, 3 in Preston, 3 in Birmingham, 2 in Liverpool, and 2 in Bolton. Small-pox caused 1 death in Portsmouth.

London.—One thousand six hundred and thirty-nine deaths were registered during the week, including measles, 60; scarlet fever, 16; diphtheria, 31; whooping-cough, 37; enteric fever, 6; diarrhœa and dysentery, 14. The deaths from all causes corresponded to an annual rate of 19.7 a thousand. Diseases of the respiratory organs caused 396 deaths; different forms of violence, 64; and 5 suicides were registered. In greater London 2,016 deaths were registered, corresponding to an annual rate of 18.6 a thousand of the population. In the "outer ring" the deaths included measles, 12; diphtheria, 10.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended March 16, in the 16 principal town districts of Ireland, was 25.7 a thousand of the population. The lowest rate was recorded in Lurgan, viz., 5.1, and the highest in Drogheda, viz., 42.3 a thousand. In Dublin 181 deaths were registered, including whooping-cough, 2; scarlet fever, 1; enteric fever, 3; measles, 3; and typhus, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended March 16, corresponded to an annual rate of 25.4 a thousand of the population, which is estimated at 1,314,274. The lowest mortality

was recorded in Leith, viz., 11.6 and the highest in Glasgow, viz., 32.4 a thousand. The aggregate number of deaths registered from all causes was 650, including measles, 45; scarlet fever, 5; diphtheria, 7; whooping-cough, 37; fever, 2; and diarrhœa, 10.

Buenos Ayres, Argentine Republic.—The United States consul, in his dispatch dated February 19, 1889, writes as follows:

"I have to advise you that there is just now a very uneasy feeling in regard to the public health of this port—not that there is any greater amount of sickness than is usual at this season, but there are grave fears in reference to the approach of yellow fever. About a month ago, several transports with Brazilian troops on board from Rio Janeiro, were permitted by the Montevidean authorities to pass up the river to the Brazilian province of Matto Grosso, with some sickness on board, and since then the fever has appeared in Corumba, Brazil. On this account a quarantine of observation has been established by the Argentine government at the mouth of the Paraguay River, on all vessels proceeding from Matto Grosso or Paraguay. But a still greater alarm has been occasioned by the arrival here, a few days ago, of the royal mail steamer "Atrato," from Southampton, England. Unfortunately the vessel touched at Rio Janerio, where the yellow fever is now raging, and on the passage down from the latter port, several cases broke out on board, two of them having already proved fatal. The vessel was refused an entrance at Montevideo, and she then steamed up to this port, but she is detained outside, about 12 miles down the river. Her passengers, of which she has a large number, have been transferred to two river boats, to be anchored off Point Piedras, about 30 miles from Buenos Ayres, until their quarantine shall have expired. It is said that the steamer will not be allowed an entrance, and also that she will have to return to England with her cargo. These two occurrences have caused considerable fear in the city lest we may have a visitation of yellow fever; and to guard against such a calamity the authorities are now enforcing the strictest quarantine against all infected ports. Thus far no cases have been reported in any of the ports of the Argentine Republic.

Santiago de Cuba.—The United States consul furnishes the following report:

Statistics and deaths from various causes in Santiago de Cuba during month of February, 1889.

	In town.	In military hospital outside city limits.
Consumption	13	.....
Yellow fever	2	8
Pernicious fever	7	.....
Other diseases	48	4
Total	70	12

The diseases described as other diseases, which number 48 among its victims, are principally children diseases, which have carried off negro and mulatto children. The temperature has been variable, with high north winds and lower thermometer. At San Luis, a village 27 miles from this city, a small-pox epidemic was at one time threatened, which was confined entirely to the negroes and mulattoes; 22 were down with it, and 2 children died, but although 2 light cases were reported here, neither resulted fatally and danger is averted, and the facts do not warrant me to create alarm by putting these cases on bills of health issued to vessels clearing for the United States.

Yellow fever has been greatly on the decline, and this month has given the most satisfactory sanitary showing for a long time; 92 deaths per month in a population of nearly 50,000 inhabitants is a surprisingly low rate.

Health report of Santiago de Cuba and surrounding country for the first half of March, 1889.

Diseases.	Cases.	Deaths.
Varioloid	3	.....
Throat diseases	(*)	.....
Dysentery, children	11	5
Diarrhœa	36	.....
Paludic and catarrhal fevers	(*)	5
Pernicious fevers	2	2
Yellow fever	1	1
Rheumatism	22	.....
Hydropsia	4	4
Consumption	15	15
Tabes mesenterica	8	8
Paralysis	4	.....
Unknown	5	.....
Lesions of the heart	3	3
Cerebral lesions	2	2
Hepatitis	1	1
Wounds and contusions	3	.....
Burns	5	4
Ophthalmia	32	.....
Suicides	1	1
Old age	2	2
Diseases	160	53

These statistics combine the city and the surrounding country for twenty leagues. Small-pox has entrely disappeared, and yellow fever is confined to the military hospital outside of town limits. The health of the port is excellent, and I have issued clean bills of health to vessels clearing from this port for the United States.

Malta and Gozo.—Four hundred and one deaths were registered during the month of February, 1889, including, measles, 64; whooping cough, 20; diphtheria, 3; and dysentery, 4.

Palermo, Italy.—The United States consul reports that during the month of February, 1889, there were 7 deaths from small-pox.

Catania, Italy. —One thousand four hundred and thirty deaths were registered during the year 1888, in an estimated population of 107,165. The deaths included, small-pox, 869; enteric fever, 105; and other

*Reigning.

contagious diseases, 406. The sanitary condition of the' city was not very good.

Pernambuco, Brazil.—The United States consul, under date of February 28, 1889, reports that "the sanitary-inspector of the port of the Province of Espiritu Santo has decreed quarantine against all vessels arriving from Rio de Janeiro, where the yellow fever is spreading itself."

Havana, Cuba.—Seven deaths from yellow fever were reported during the week ended March 8; 2 for the week ended March 15, and 4 for the week ended March 22, 1889.

Colon, U. S. of Colombia.—The United States consul telegraphs the Department of State, under date of April —, 1889 (received April 3, 9 p. m.), "Yellow fever in Colon."

Cardenas, Cuba, March 29, 1889.—Weather cool, pleasant, and dry. Health of the town and harbor good.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Mar. 9	5,642,015	2,023	.....	.....	.....	.....	4	16	24	83	.....
Paris	Mar. 16	2,260,945	1,100	.....	.....	5	.....	10	4	40	33	7
Glasgow	Mar. 16	545,678	329	.....	.....	.....	.....	1	3	1	.....	.....
Warsaw	Mar. 9	444,814	238	.....	.....	4	.....	.....	5	9	.....	.....
Calcutta	Feb. 9	433,219	227	22	.....	1	.....	.....	.....	.....	1	.....
Calcutta	Feb. 16	433,219	196	22	.....	1	.....	.....	.....	.....	.....	.....
Rome	Feb. 2	401,044	268	.....	.....	5	.....	1	1	3	.....	.....
Rome	Feb. 9	401,044	214	.....	.....	2	.....	1	2	3	.....	.....
Amsterdam	Mar. 9	399,051	187	.....	.....	.....	.....	1	.....	7	.....	.....
Amsterdam	Mar. 16	399,051	176	.....	.....	.....	.....	4	.....	3	.....	.....
Copenhagen	Mar. 9	307,000	109	.....	.....	.....	.....	.....	2	2	.....	.....
Rio de Janerio	Feb. 17	300,000	458	.....	136	1	21	8	.....	.....	.....	.....
Rio de Janeiro	Feb. 24	300,000	400	.....	101	1	15	7	.....	1	.....	.....
Edinburgh	Feb. 16	266,900	98	.....	.....	.....	1	.....	.....	3	.....	.....
Edinburgh	Feb. 23	266,900	105	.....	.....	.....	.....	1	1	2	.....	.....
Edinburgh	Mar. 2	266,900	101	.....	.....	.....	.....	.....	.....	2	.....	.....
Palermo	Mar. 16	250,000	92	.....	.....	.....	.....	.....	4	2	.....	.....
Belfast	Mar. 16	229,622	120	.....	.....	.....	.....	1	.....	1	.....	.....
Bristol	Feb. 23	229,361	82	.....	.....	.....	.....	1	.....	.....	.....	.....
Bristol	Mar. 2	229,361	73	.....	.....	.....	.....	1	1	.....	.....	.....
Bristol	Mar. 9	229,361	76	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bristol	Mar. 16	229,361	101	.....	.....	.....	.....	.....	.....	1	.....	.....
Genoa	Mar. 16	179,872	124	.....	.....	1	1	.....	.....	1	.....	.....
Toronto	Mar. 30	170,000	22	.....	.....	.....	.....	1	.....	1	.....	.....
Trieste	Mar. 9	154,500	103	.....	.....	2	.....	.....	1	1	.....	.....
Stuttgart	Mar. 16	125,510	68	.....	.....	.....	.....	.....	3	1	.....	.....
Barmen	Mar. 16	109,000	43	.....	.....	.....	.....	.....	.....	.....	.....	2
Leghorn	Mar. 17	102,893	56	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	Feb. 16	76,400	29	.....	.....	.....	.....	.....	5	1	.....	.....
Leith	Feb. 23	76,400	26	.....	.....	.....	.....	.....	.....	1	.....	.....
Leith	Mar. 2	76,400	22	.....	.....	.....	.....	.....	.....	1	.....	.....
Mayence	Mar. 9	65,802	28	.....	.....	.....	.....	.....	.....	7	.....	.....
Cadiz	Mar. 16	65,028	47	.....	.....	.....	.....	.....	.....	.....	.....	.....
Curaçao	Mar. 16	25,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Mar. 10	23,631	12	.....	.....	.....	.....	.....	.....	1	.....	.....
Kingston, Can	Mar. 29	17,300	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Mar. 9	7,428	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Mar. 16	7,428	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	Feb. 6	5,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	Feb. 13	5,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	Feb. 20	5,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	Feb. 27	5,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

PUNTA GORDA, FLA., *March* 28, 1889.

SIR: In obedience to your instructions, I have inspected the town of Punta Gorda. This town is situated in De Soto County, on Charlotte Harbor, an arm of the Gulf of Mexico, and is sparsely built, with a population of only 300, and has been incorporated since the year 1887. Its present sanitary condition is good, and from an interview with Doctor Burland, the health officer and only resident physician, I am imformed there is no sickness prevalent among the resident population. The admirable situation of this point should make it one of the healthiest of the Gulf coast resorts of Florida, and its splendid deep-water harbor one of the principal sea ports of this State. It is connected by the South Florida Railway with the Jacksonville, Tampa and Key West Railroad system, which it joins at Lakeland and Bartow Junction. By strict quarantine measures, enforced during the prevalence of the fever at Key West in 1887, and later at Tampa, this point escaped infection. There is only one line of steamers (the Morgan Steamship Company) touching here on its way from Havana, at the South Florida Railroad dock, 2 miles beyond the town. The principal traffic is in fish and oysters and fruit from the islands, and the danger of an introduction of yellow fever at or through this point is in the smaller craft—fishing smacks and fruit vessels. A quarantine station, established at Cape Haze, at the entrance of Charlotte Harbor, about 20 miles south of Punta Gorda, could control the movement of these vessels, which are largely engaged in smuggling tobacco and "agua ardiente" from the tropics, and would be an ample protection to this port, which seems destined in the near future to become one of considerable importance. It is my firm conviction that the establishment of such a station at the point named would be highly beneficial in its results. The proximity of this point to Havana and Key West entitles it to some protective measures, as it is in direct communication with a very populous region north of it, and within twelve hours (by rail) of Jacksonville, the commercial metropolis of Florida. There is no system of sewerage, except from the Punta Gorda hotel, the natural surface drainage into the harbor being good. The water supply is from cisterns; closets are open. The mayor is Jas. L. Sandlin. Health officer, Doctor Burland.

Very respectfully,

J. L. POSEY, M. D.

To Surgeon-General HAMILTON,
United States Marine-Hospital Service.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Mar. 30	1,559,964	880	.....	.....	.....	.....	.....	.....	5	57	47	13	14
Philadelphia, Pa	Mar. 30	1,040,245	389	.....	.....	.....	.....	.....	.....	18	10	9	1	2
Brooklyn, N. Y.	Mar. 30	814,505	390	.....	.....	.....	.....	.....	.....	.....	10	29	8	10
Baltimore, Md	Mar. 30	500,343	156	.....	.....	.....	.....	.....	.....	4	5	4	.....	.....
San Francisco, Cal	Mar. 22	330,000	106	.....	.....	.....	.....	.....	.....	1	2	1	.....	.....
Cincinnati, Ohio	Mar. 30	255,139	134	.....	.....	.....	.....	.....	.....	3	.....	3	2	.....
Detroit, Mich.	Mar. 23	250,000	61	.....	.....	.....	.....	.....	.....	.....	1	2	.....	1
New Orleans, La.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newark, N. J.	Mar. 26	180,000	75	.....	.....	.....	.....	.....	.....	.....	1	6	.....	.....
Providence, R. I.	Mar. 30	127,000	44	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Rochester, N. Y.	Mar. 30	125,000	42	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2
Richmond, Va.	Mar. 23	100,000	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Denver, Colo.	Mar. 29	100,000	20	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Toledo, Ohio	Mar. 29	80,000	23	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Nashville, Tenn.	Mar. 30	65,153	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	Mar. 30	65,000	23	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Lynn, Mass	Mar. 30	50,000	17	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Manchester, N. H	Mar. 23	42,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Mar. 30	42,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	Mar. 23	33,715	9	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
East Saginaw, Mich.	Mar. 30	33,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	Mar. 23	30,000	14	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Newport, R. I.	Mar. 29	22,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Mar. 30	21,553	8	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa	Mar. 23	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Pensacola, Fla.	Mar. 23	15,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Erie, Pa.—Month of February, 1889; estimated population, 39,000. Total deaths, 44, including membranous croup, 1; enteric fever, 2.

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 15. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., April 12, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended April 12, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended March 23, corresponded to an annual rate of 20.8 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz., 15.0, and the highest in Blackburn, viz., 36.1 a thousand. Diphtheria caused 2 deaths in Manchester, 5 in Salford, 2 in Birmingham, 2 in Norwich, and 3 in Bolton.

London.—One thousand five hundred and fifty-five deaths were registered during the week, including measles, 84; scarlet fever, 6; diphtheria, 23; whooping-cough, 42; enteric fever, 4; diarrhœa and dysentery, 18. The deaths from all causes corresponded to an annual rate of 18.6 a thousand. Diseases of the respiratory organs caused 378 deaths; different forms of violence, 54; and 9 suicides were registered. In greater London 1,952 deaths were registered, corresponding to an annual rate of 18.1 a thousand of the population. In the "outer ring" the deaths included measles, 23; diphtheria, 5; and whooping-cough, 10.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended March 23, in the 16 principal town districts of Ireland, was 24.7 a thousand of the population. The lowest rate was recorded in Newry, viz., 10.5, and the highest in Galway, viz., 43.7 a thousand. In Dublin 178 deaths were registered, including whooping-cough, 1; scarlet fever, 1; enteric fever, 2; measles, 1; and typhus, 1; diarrhœa, 1; and dysentery, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended March 23, corresponded to an annual rate of 23.4 a thousand of the population, which is estimated at 1,314,274. The lowest mortality

was recorded in Greenock, viz., 16.6 and the highest in Glasgow, viz., 30.0 a thousand. The aggregate number of deaths registered from all causes was 599, including measles, 33; scarlet fever, 2; diphtheria, 10; whooping-cough, 31; fever, 5; and diarrhœa, 4.

Brazil, Rio Grande do Sul.—The United States consul, under date of March 1, 1889, states that "on the 19th day of February the Brazilian steamer 'Victoria,' belonging to the National Steamer Navigation Company, plying between this city and Rio de Janeiro, entered the port of Rio Grande do Sul with 195 Spanish and Italian immigrants, many of whom were sick, and afterwards removed to the public hospital. Though at first not made known to the public, it subsequently developed that the disease from which these poor people were suffering was yellow fever.

"Within one week, up to the 28th day of February, seven deaths and nine cases under treatment were reported from the hospital.

"The steamer 'Victoria,' I am informed has a registered tonnage of 435; carried no physician or medicines aboard for the treatment of the sick, and time employed, including calls, to make a voyage from Rio de Janeiro is five days.

"The failure of the National Company to provide necessary medical aid on board its steamers, as well as over-crowding them with passengers, and the great carelessness of the health authorities here in permitting the introduction of yellow fever into the heart of the city have received scathing criticisms from the Rio Grande press.

"As the disease is at present confined to the imported cases in the hospital, I have not thought it necessary to wire the Department, as provided by the Regulations when certain diseases become epidemic."

The following has been received concerning the health of Rio de Janeiro:

CONSULATE GENERAL, U. S. A.,
Rio de Janeiro, March 7, 1889.

SIR: * * * * * *

In addition to the information given in my dispatch, No. 172, as to the health of this city, I have deemed it my duty to communicate the following: Not only is the yellow fever prevalent here to an alarming degree at this time, but there are also many fatal cases of typhus, typhoid, bilious, remittent, and other fevers. There has also appeared a new and very malignant disease which is puzzling the physicians of this city, and which, for want of a better name, they call *Accesso pernicioso* (pernicious stroke). This disease, whose action is very rapid, is supposed by some physicians to be caused by emanations from the sewerage pipes of the city. As the weather is extremely hot and very dry the supply of water is greatly diminished, and the washing of the pipes is said to be very imperfect. Of the 129 deaths reported to-day,

24 were caused by yellow fever, 13 by typhus fever, 9 by other fevers, and 33 by the new disease, *Accesso pernicioso.*

The situation grows worse every day, and will continue to do so until we have abundant rains. My official family are well again and at work.

I shall keep the Department advised if the sanitary condition does not improve.

I have, &c.,

H. CLAY ARMSTRONG,
Consul-General.

Hon. G. L. RIVES,
Assistant Secretary of State, Washington, D. C.

Uruguay, Montevideo.—Three hundred and eighty-six deaths were registered during the month of January, 1889, including 3 from small-pox and 16 from typhus and enteric fever. The sanitary condition of the city is good. "Strict quarantine is enforced against Rio de Janeiro on account of yellow fever, which keeps this city in constant dread."

Cuba, Havana.—The U. S. sanitary inspector reports there were 515 deaths in that city during the month of March, 19 of which were from yellow fever, 10 from enteric fever, 25 from so-called pernicious fever, 3 from paludal fever, 2 from diphtheria, 6 from croup, 2 from glanders, and 1 from hydrophobia.

There were 4 deaths from yellow fever during the week ended March 29.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Mar. 23	2,260,945	1,160	.....	.....	6	.....	9	3	45	46	5
Glasgow	Mar. 23	547,678	305	.....	.....	.....	.....	2	1	7	.....	.....
Warsaw	Mar. 16	444,814	234	.....	.....	5	.....	.....	3	4	.....	.....
Amsterdam	Mar. 23	399,051	174	.....	.....	.....	.....	.....	.....	3	.....	.....
Copenhagen	Mar. 16	307,000	127	.....	.....	.....	.....	4	12	18	.....	.....
Rio de Janerio	Mar. 3	300,000	491	.....	107	6	41	6	.....	.....	.....	.....
Palermo	Mar. 23	250,000	80	.....	.....	.....	.....	.....	3	1	.....	.....
Munich	Feb. 23	281,000	176	.....	.....	.....	.....	.....	2	12	.....	.....
Munich	Mar. 2	281,000	151	.....	.....	.....	.....	2	3	4	.....	.....
Munich	Mar. 9	281,000	163	.....	.....	.....	.....	1	3	4	.....	.....
Belfast	Mar. 23	229,622	110	.....	.....	.....	.....	.....	.....	1	.....	.....
Trieste	Mar. 16	154,500	90	.....	.....	.....	.....	.....	.....	2	.....	.....
Stuttgart	Mar. 23	125,510	53	.....	.....	.....	.....	.....	.....	1	.....	.....
Havre	Mar. 16	112,074	63	.....	.....	2	.....	.....	.....	.....	.....	.....
Leghorn	Mar. 24	102,893	54	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Mar. 16	65,802	27	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Mar. 7	47,448	42	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Mar. 15	47,448	39	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Mar. 17	23,631	5	.....	.....	.....	.....	.....	.....	2	.....	.....
Laguayra	Mar. 23	7,428	5	.....	.....	.....	.....	.....	.....	.....	.....	.....

The following is the statement of the condition of the U. S. Quarantine Service at the present time:

Quarantine Station, Delaware Breakwater, Lewes, Del.

A bill is pending in the Delaware Legislature conveying site to the United States. The site had been previously deeded to the War Department, but is said to have reverted to the State by reason of failure to comply with the provisions of the act. Hospital facilities, though limited, are already provided and a steam boarding vessel will be chartered for service at the opening of the quarantine season May 1. A regular inspection of vessels is maintained at this station.

A new steam-tug with disinfecting machinery is in course of construction. A new warehouse and other buildings are also contemplated but cannot be begun until after the Legislature of Delaware has passed the desired act ceding jurisdiction over the site.

Cape Charles Quarantine Station, Fisherman's Island, Virginia.

A decree of court has been finally obtained authorizing the sale by the heirs to the estate of Fisherman's Island. The decree has been referred to the Attorney-General by the Secretary of the Treasury, with a request to perfect the title and secure the property. A fumigating steamer and a boarding steamer will be furnished. The construction of wharf, hospital, buildings, and officers' quarters must await the purchase of site.

The quarantine is at present in active operation under management of medical officers of the service, with limited facilities upon Fisherman's Island, now under rental, and with a steam boarding-vessel owned by the service.

South Atlantic Quarantine Station, Blackbeard Island, Sapelo Sound, Georgia.

Plans for boat-house, wharf, and store-house finished. Advertisement is being made for proposals to perform the work of construction.

A fumigating steamer will be furnished as soon as practicable, and until this is done the usual method of fumigating with sulphur will be employed. A temporary hospital and other buildings are being erected under the superintendence of the medical officer in charge.

Key West Quarantine, Dry Tortugas, Florida.

The board appointed, under provision of the act of Congress, approved August 2, 1888, to select a site for the quarantine station at or near Key West, chose the following keys situated among the Dry Tortugas sixty miles from Key West, viz., Garden, Bird, and Loggerhead Keys.

The War Department has transferred the custody of these keys to the Treasury Department.

The lazaretto and the bacteriological laboratory for investigation of yellow fever will be upon Bird Key.

The warehouse, detention buildings, quarters, &c., will be upon

Garden Key. Fort Jefferson, on Garden Key, will be utilized in the quarantine establishment.

A protest has been filed by the Light-House Department, to which answer has been made, and Loggerhead Key will be retained by the Light-House Board.

Gulf Quarantine, Chandeleur Island, Miss., (formerly at Ship Island).

The new buildings on Chandeleur Island have been completed, and the station was formally occupied March 17th, a transfer of all serviceable property having been made from Ship Island.

The captain of the revenue cutter Seward has been instructed to burn the abandoned yellow fever hospital on Ship Island, and all condemned property.

Plans for a fumigating vessel for this station have been approved, the contract awarded, and the vessel is in process of construction.

San Diego, Cal.

The War Department has declined to cede the site selected by the special board convened for that purpose.

There being no other available site at or near this station, the erection of buildings is at present impracticable. An inspection service, however, will be maintained during the quarantine season.

San Francisco, Cal.

The board appointed to select a site for a quarantine station in San Francisco Bay, recommended a tract of land, some ten acres in extent, in Hospital Cove, on Angel Island. The War Department has given jurisdiction over said portion of Angel Island, and detailed two officers to form, with an officer of the Marine-Hospital Service, a board for determining the boundary line, which has been accomplished. The Supervising Architect of the Treasury has begun plans for detention barracks, hospital buildings, and quarters. The hospital buildings will be similar to those erected on Chandeleur Island, but, in addition, provision will be made for the detention of emigrants. Advertisement for proposals for construction of the entire work will be received within three or four weeks.

Port Townsend, Wash. Ter.

The site for a quarantine station, selected by the commission appointed for that purpose, is a piece of land with a frontage of three-fourths of a mile on Squim Bay, in the Straits of Fuca. The location being upon a military reservation, the transfer of authority to the Treasury Department is still pending, but in the meantime numerous protests on the part of citizens have been received declaring the location to be undesirable, and it will, therefore, be necessary to change it. Pending settlement regarding site, an inspection service will be maintained at this station.

Fumigating Steamers.

Messrs. Pusey & Jones, of Wilmington, Del., are under contract to complete three fumigating steamers for use at the several quarantine stations. Additional steamers are advertised for, to be constructed and used on the Pacific coast.

REPORT OF BOARD OF OFFICERS DETAILED TO ESTABLISH THE BOUNDARY LINE OF THE QUARANTINE-RESERVATION ON ANGEL ISLAND, SAN FRANCISCO BAY.

UNITED STATES ENGINEER OFFICE,
533 *Kearny Street, San Francisco, Cal., March* 26, 1889.

SIR: The following report is respectfully submitted, in regard to fixing the limits of the quarantine-ground authorized to be transferred to the Treasury Department, by the War Department letter of December 22, 1888, and directed by Special Orders No. 11, Adjutant General's Office, current series, paragraph 13.

A tracing is inclosed, showing the courses and distances bounding the area recommended for transfer. This area is determined by surrendering all ground in Hospital Cove available for building, and a strip a chain wide, more or less, along either shore, extending to the northern limits of the cove, reserving a practicable location for a piece of road, passing in rear of the tract, to replace the intercepted portion.

By including the shores of the cove in the surrendered tract, the quarantine authorities are given control of the whole shore-line of Hospital Cove.

An old building belonging to the Quartermaster's Department stands on the tract. It is not practicable to move the building as a whole to another part of the island, and the building is not worth removal even if this course were practicable. It, therefore, falls to the quarantine authorities, and may be useful as quarters for attendants or boatmen. Its value is estimated at about $800.

The following is a description of the tract, to be read in connection with the tracing:

Commencing at a point at the southeastern end of the cove, near high-water mark (the point bearing N. 13° W., and distant 4.62 chains from a center of a fresh-water spring), called point 1 on chart; running thence S. 21¼° E., 8.50 chains, to point 2; thence S. 68¼° W., 4.00 chains, to point 3; thence N. 88½° W., 1.62 chains, to point 4; thence N. 74° W., 1.84 chains, to point 5; thence N. 51° W., 7.30 chains, to point 6. Thence from point 6 to point 1, to circumscribe the available tract, on the following courses and distances: N. 66° E., 1.09 chains to point 7; thence N. 73¼° E., 3.46 chains to point 8; thence N. 61¼° E., 5.98 chains, to point 1, the place of beginning, all courses being magnectic.

This area contains 6.52 acres.

Thence for additional area to command the water-front on either side of Hospital Cove, as shown on accompanying chart, in light yellow, as follows:

Beginning at point 1, and following the line of the bluffs as near as practicable, parallel to the high-water line, N. 43° E., 3.00 chains, to a point; thence N. 25° E., 2.50 chains, to a point; thence N. 13° W., 3.00 chains, to a point; thence N. 55° W., 3.00 chains, to a point; thence N. 5.00 chains, to a point; thence N. 52° W., about 3.50 chains, to the end of the point at high-water mark.

Likewise from point 6 in the same manner, following the line of bluffs, N. 72° W., 3.00 chains, to a point; thence N. 38° W., about 9 chains, to the end of the point at high-water mark.

For this area of water-front, 3.64 acres are estimated additionally, making the total area of the reserve 6.52+3.64=10.16 acres, or say 10 acres, more or less.

The corners are marked by substantial posts, easily recognizable, which fact seems to make it unnecessary to determine the variation of the compass, involving delay.

The new road leads over the hills, passing the southern end of the tract, rising on a grade of 1 in 17 to an elevation of 100 feet above high water, then falling to connect with the old road, on a grade of 1 in 13.

Length of road, about 1,500 feet (1,452 feet); amount of excavation necessary, 3,158 cubic yards; cost, about $800.00.

Respectfully submitted,

G. H. MENDELL,
Colonel, Corps of Engineers.
D. F. CALLINAN,
Captain, 1st Infantry.
HENRY W. SAWTELLE,
Surgeon United States Marine-Hospital Service.

THE ADJUTANT-GENERAL U. S. ARMY,
Washington, D. C.

SANITARY INSPECTION OF PALMETTO, FLA.

TAMPA, FLA., *April* 2, 1889.

SIR: In obedience to your instructions, I have inspected the village of Palmetto, Fla. This is a recent settlement, situated on the north bank of the Manatee River, 5 miles from its mouth, and about 45 miles south of Tampa. It has a population of about 250, and covers an area of one-half mile square. The stores and dwellings are scattered along the river bank at considerable distance from each other and are mostly built on piles on account of tidal overflow. This, as well as the other river towns, are in daily communication with Tampa by steamer from Port Tampa. The soil is sandy and known as "scrub land," covered with stunted oak, pine, and dense growth of palmetto, and has but a slight elevation from the shore line. There are small areas of salt marsh and a creek lying to the northwest of the hamlet and contiguous to the cemetery, which is just in the rear of the village. The general sanitary condition of this place is poor, and during the rainy season is more or less inundated, there being but imperfect natural drainage, and a few feet below the surface a "hardpan" is found, composed of sand-stone, through which water percolates slowly. At the time of my inspection the health of the community was good—there being no sickness of any kind. Since the occurrence of the last case of yellow fever, which was a fatal one, November 23, 1888, the residents destroyed all bedding used by the sick, and houses were fumigated. I was informed by some of the residents that the sanitary board of the village contemplated opening a deep trench around their cemetery into a small creek that flows into the river, and which borders the grave yard at a distance of about 25 feet. An inspection of this burial-plot revealed the fact that the bodies (the eleven deaths from yellow fever during the summer and winter) were only interred from 3 to 3½ feet below the surface, the graves, at the time of interment, being filled with water, the coffins were submerged by heavy weights. If this drain had been dug, the fluids from these decaying bodies might have contaminated the creek and the river. From some of these small mounds of shifting sand heaped over these

recent graves a distinct odor of putrifaction was emitted, and I advised those in charge to have a thick layer of lime spread over each grave and over this 3 feet of sand compactly thrown. Just previous to my inspection, an application had been made to have one of these bodies disinterred for removal to some northern town, but the local authorities absolutely prohibited any such action. As to the origin of the late epidemic, during which there occurred 85 cases (1 being an Indian), and 11 deaths, the intelligent members of the community trace its introduction from Manatee, through some wearing appared of Mr. Cooper, which had been brought over in a trunk from the room of the house in which Mrs. Clark died. The wife of Mr. Cooper nursed Mrs. Clark during her illness, and on returning home to Palmetto was taken sick within ten days after unpacking the trunk of clothing brought from Manatee. All the members of the Cooper family subsequently had the fever. It is claimed by the oldest inhabitants that these towns along the Manatee River are virtually below the frost line, as they state that the tenderest plants thrive during the entire winter season in the open air, and ice is seldom seen along the river. The extreme mildness of the winters, in this latitude, certainly renders these points more likely than many others in the state where the fever has prevailed in an epidemic form, to retain the infection in a latent condition ready to be revivified and made active by the advent of a high temperature. There are typhoid types of fever prevalent here during the dry season, due, no doubt, to the water supply, which is obtained from wells at a depth of 5 to 10 feet. I think it wise that these points along the river be closely scrutinized on the advent of summer, as all the conditions, as far as I can judge, exist to favor a recurrence of the disease, and that these places are more liable to the introduction of this disease from Havana, as they are frequently visited by the fishing smacks and fruiters plying their trade along the Gulf coast.

Very Respectfully,

J. L. POSEY, M. D.,
Sanitary Inspector.

To Surgeon-General HAMILTON,
United States Marine-Hospital Service.

SANITARY INSPECTION, MANATEE, FLA.

TAMPA, FLA., *April* 2, 1889.

SIR: In obedience to your telegraphic orders, I have inspected the town of Manatee, Fla., situated on the Manatee River (south bank), five miles from its mouth. The town is sparsely settled, and has a population of less than 300. The site of this town is low, flat, pine woods, with dense undergrowth of palmetto and scrub oak, bounded on east and west by two sluggish creeks which partially drain it and the adjacent country. The soil is sandy with a substratum of phosphatic sandstone, and during the rainy season is more or less inundated. The water supply is obtained from surface wells, 10 to 12 feet deep, and cisterns, and no systematic disposal of excreta. A stroll through the village revealed a very imperfect sanitary condition, and the lack of even adequate surface drainage must tend to render the locality unhealthy. There is daily communication with Tampa and other towns on the river by steamer from Port Tampa, and weekly with Mobile, Ala. At the date of my inspection there was only one case of sick-

ness in the town, which I visited, a lady, Mrs. McNiel, a patient of Dr. Pelot, who kindly invited me to see her. The disease from which she is suffering is a malarial remittent with typhoid symptoms. Since the close of the epidemic, there has been no destruction of infected bedding or fumigation of houses practiced here. Mayor J. Gates informed me that the premises where the fever had prevailed had been partially cleansed, and the fœcal accumulations disinfected by the residents. Beyond this, no measures have been taken with a view of preventing a recurrence of the fever; and as there has not been at any time during the winter a temperature low enough to destroy the infectious material, which it is presumable remains in the houses where the disease occurred, it is not improbable that there may be, during the coming summer, a fresh outbreak of the specific poison which has thus far lain dormant. From the statement of Dr. J. C. Pelot, of Manatee, there were, during the prevalence of the epidemic, about 140 cases of fever on the south side of the river. Dr. Pelot has taken the position that the disease was dengue, with the exception of the case of Mrs. Clark, who died on July 20, 1888. Whether his view of the matter is tenable, I do not propose to discuss; but the fact that the death rate was remarkably low is only an indication of the mildness of the type, but does not alter the true nature of the disease, which certainly was yellow fever, in the opinion of Drs. Wall and Murray, who are both eminently qualified to diagnose this disease, and with whom I fully concur. Some few cases occurred at Braidentown, about a mile distant from Manatee, but there was at the time of my visit no sickness in the village. The location of the cemetery at Manatee, which is virtually in the midst of the dwellings, is, owing to the porous nature of the soil, well calculated to be productive of a typhoid type of fevers, as the well-water is obtained at a depth of a few feet from the surface, and must necessarily become contaminated with organic matter. There seems to exist a laxity and indifference in regard to such simple sanitary precautions as the nature of the soil would indicate as essential in so many of the small towns of Florida, that it is a matter of surprise to me that the inhabitants enjoy such a marked immunity from fevers. The origin of the fever at this point has been traced to the introduction of clothing from Tampa, and its subsequent spread covers a period of many months.

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Very respectfully,

J. L. POSEY, M. D.,
U. S. Sanitary Inspector, Marine-Hospital Service.

To Surgeon-General HAMILTON,
United States Marine-Hospital Service.

Michigan.—Reports to the State board of health, Lansing, from forty-five observers in different parts of the State, indicate that for the week ended April 6, 1889, "rheumatism, erysipelas, consumption of lungs, intermittent fever, remittent fever, and neuralgia, increased, and that pleuritis and puerperal fever decreased in area of prevalence." Diphtheria was reported during the first ten days of April at ten cities and townships in the State.

California, Los Angeles.—Month of March, 1889: Estimated popula-

tion, 80,000. Total deaths, 51, including diphtheria, 3; membranous croup, 1; typhoid fever, 1.

California, Sacramento.—Month of March, 1889: Estimated population, 35,000. Total deaths, 29.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Apr. 6	1,560,836	862	.....	.....	.....	.....	.....	.....	6	71	48	13	19
Philadelphia, Pa.	Apr. 6	1,040,245	372	.....	.....	.....	.....	.....	.....	7	5	16	1	1
Chicago, Ill	Apr. 6	830,000	291	.....	.....	.....	.....	.....	.....	1	6	22	15	1
Brooklyn, N. Y.	Apr. 6	821,525	347	.....	.....	.....	.....	.....	.....	.....	12	23	8	5
Cincinnati, Ohio	Apr. 6	255,139	112	.....	.....	.....	.....	.....	.....	.....	.....	7	1	.....
Baltimore, Md	Apr. 6	500,343	162	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1
Saint Louis, Mo.	Mar. 30	440,000	168	.....	.....	.....	.....	.....	.....	.....	.....	10	2	3
Detroit, Mich.	Mar. 30	250,000	69	.....	.....	.....	.....	.....	.....	1	2	.....	.....	1
Pittsburgh, Pa.	Apr. 6	230,000	85	.....	.....	.....	.....	.....	.....	1	3	1	2	2
Cleveland, Ohio	Mar. 2	235,000	75	.....	.....	.....	.....	.....	.....	3	1	2	.....	.....
Cleveland, Ohio	Mar. 9	235,000	77	.....	.....	.....	.....	.....	.....	.....	3	1	.....	1
Cleveland, Ohio	Mar. 16	235,000	77	.....	.....	.....	.....	.....	.....	3	.....	2	.....	.....
Louisville, Ky	Mar. 30	227,000	70	.....	.....	.....	.....	.....	.....	2	.....	.....	1	6
Washington, D. C.	Mar. 30	225,000	89	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	2
Washington, D. C.	Apr. 6	225,000	123	.....	.....	.....	.....	.....	.....	4	.....	3	.....	3
New Orleans, La.	Mar. 30	254,000	96	.....	.....	.....	.....	.....	.....	1	1	1	1	.....
Milwaukee, Wis.	Mar. 30	210,000	67	.....	.....	.....	.....	.....	.....	.....	2	3	.....	.....
Milwaukee, Wis.	Apr. 6	210,000	54	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....
Minneapolis, Minn.	Mar. 30	200,000	52	.....	.....	.....	.....	.....	.....	.....	1	4	.....	.....
Newark, N. J.	Apr. 2	181,351	63	.....	.....	.....	.....	.....	.....	.....	2	6	.....	.....
Newark, N. J.	Apr. 9	181,351	96	.....	.....	.....	.....	.....	.....	1	3	7	.....	.....
Kansas City, Mo.	Mar. 30	180,000	22	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....
Providence, R. I.	Apr. 6	127,000	43	.....	.....	.....	.....	.....	.....	.....	2	2	.....	1
Rochester, N. Y.	Apr. 6	120,000	34	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	1
Richmond, Va.	Mar. 30	100,000	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond, Va.	Apr. 8	100,000	46	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Denver, Colo.	Apr. 5	100,000	32	.....	.....	.....	.....	.....	.....	.....	.....	3	1	.....
Toledo, Ohio	Apr. 5	80,000	14	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Camden, N. J.	Mar. 14	70,000	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Camden, N. J.	Mar. 21	70,000	18	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Camden, N. J.	Mar. 28	70,000	37	.....	.....	.....	.....	.....	.....	3	.....	1	.....	.....
Nashville, Tenn.	Apr. 6	65,153	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	Apr. 6	65,000	19	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Charleston, S. C.	Mar. 30	60,145	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	Apr. 6	60,145	49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynn, Mass	Apr. 6	50,000	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Apr. 5	42,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Mar. 30	32,630	14	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
East Saginaw, Mich.	Apr. 6	40,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Mar. 22	40,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Mar. 29	40,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	Mar. 30	35,000	8	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Davenport, Iowa	Mar. 30	33,715	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	Apr. 6	33,715	6	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Altoona, Pa	Mar. 30	30,000	5	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Altoona, Pa	Apr. 6	30,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Mar. 30	26,000	13	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Auburn, N. Y.	Apr. 6	26,000	11	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Haverhill, Mass.	Mar. 31	25,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Apr. 6	25,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Mar. 28	22,000	5	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Newport, R. I.	Apr. 4	22,000	8	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Newton, Mass.	Apr. 6	21,533	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	Mar. 30	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	Apr. 6	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Mar. 30	15,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Apr. 6	15,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 16. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., April 19, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended April* 19, 1889, *and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

England and Wales.—The deaths registered in 28 great towns of England and Wales during the week ended March 30, corresponded to an annual rate of 19.9 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Derby, viz., 12.7, and the highest in Manchester, viz., 30.3 a thousand. Diphtheria caused 3 deaths in Manchester, 3 in Salford, 3 in Sheffield, and 2 in Liverpool. Small-pox caused one death in Portsmouth.

London.—One thousand four hundred and seventy-six deaths were registered during the week, including measles, 56; scarlet fever, 11; diphtheria, 18; whooping-cough, 51; enteric fever, 8; diarrhœa and dysentery, 9. The deaths from all causes corresponded to an annual rate of 17.7 a thousand. Diseases of the respiratory organs caused 332 deaths; different forms of violence, 52; and 4 suicides were registered. In greater London 1,876 deaths were registered, corresponding to an annual rate of 17.3 a thousand of the population. In the "outer ring" the deaths included measles, 13; diphtheria, 6; and whooping-cough, 7.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended March 30, in the 16 principal town districts of Ireland, was 25.6 a thousand of the population. The lowest rate was recorded in Wexford, viz., 8.6, and the highest in Waterford, viz., 48.6 a thousand. In Dublin 187 deaths were registered, including whooping-cough, 1; scarlet fever, 1; enteric fever, 2; measles, 4; and typhus, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended March 30, corresponded to an annual rate of 22.1 a thousand of the population, which is estimated at 1,314,274. The lowest mortality

was recorded in Perth, viz., 6.3 and the highest in Glasgow, viz., 29.6 a thousand. The aggregate number of deaths registered from all causes was 565, including measles, 36; scarlet fever, 1; diphtheria, 4; whooping-cough, 37; fever, 7; and diarrhœa, 7.

Brazil—Rio de Janeiro.—Eight hundred and twenty-four deaths were registered during the week ended March 10, 1889, including yellow fever, 126; small-pox, 1; typhus fever, 101; enteric fever, 8. Prevailing diseases, pulmonary affections, fevers, and "accesso pernicioso," a new disease from which, from the 6th to 10th of March inclusive, there were 186 deaths.

Ceara.—Three hundred and ten deaths were registered during the month of February, 1889. No contagious diseases reported. Sanitary condition of city good.

Argentine Republic—Buenos Ayres.—The United States minister transmits to the Secretary of State, the following under date of February 25, 1889, relative to the prevalence of yellow fever at Rio de Janeiro:

In the absence of the ministers accredited by the United States to Brazil and Uruguay, I have the honor to call the attention of the Department to the increasing spread of yellow fever in the ports of Brazil, which has rendered necessary the severe quarantine regulations imposed by this Government, referred to in my No. 199, and the consequent danger to passengers, and injury and embarrassment to our commercial relations with this country.

The steamer "Atrata" of the Royal Mail Line, left Southampton, January 17th, stopping at Rio de Janeiro four days, where she took on passengers; also at Santos where she remained twenty-four hours. Before her arrival at Montevideo, there were three deaths from yellow fever, and she was consequently ordered out to sea, her passengers having been transhipped to a river steamer chartered by the Argentine Government for quarantine purposes, where they still remain. The "Atrata" was finally ordered back to England without discharging her cargo. Previous to this, the "Britania" of the Pacific Steam Navigation Company, bound for the west coast of South America, having touched at Rio, became infected, and had two deaths from yellow fever, and her passengers for Montevideo and Buenos Ayres were put in quarantine on Flores Island for three weeks.

This ever-present menace is a severe drawback to the commercial interests of Brazil, as well as an almost perpetual source of apprehension to all the states south and west of her infected borders. During the months of November, December, January, February, and March, all tourists and commercial travelers coming this way from the United States should carefully withstand the desire to visit Rio de Janeiro, though its wonderful port attractions are a great temptation to do so.

Netherlands.—The deaths registered in the principal cities of the Netherlands, having an aggregate population of 1,129,678, during the month of February, 1889, corresponded to an annual rate of 25.0 a

thousand. The lowest rate was recorded in Arnhem, viz., 19.9; and the highest in Hertogenbosch, viz., 34.6. The deaths included typhus and enteric fever, 13; scarlet fever, 1; measles, 69; croup, 20; whooping-cough, 30; diphtheria, 19; diarrhœa and dysentery, 29; cholera nostras, 7.

Jamaica—Kingston.—One death from yellow fever was reported during the month of March, 1889.

France—Marseilles.—The United States consul reports under date of March 31, 1889, that there were 1,215 deaths during that month, including small-pox, 16; enteric fever, 25; scarlet fever, 1; diphtheria and croup, 52; measles, 58; whooping-cough, 6; diarrhœa enteritis, 43. Population, 375,378. "A good deal of sickness prevails, mostly of a pulmonary character, owing to raw spring winds and sudden changes of temperature."

Gibraltar.—The following notice is published:

MARCH 21, 1889.

The Board of Health, at a meeting held this day, declared the ports of Rio de Janeiro and Santos as "infected places," under the provisions of the quarantine order in Council, and decided to subject arrivals from Brazilian ports to twenty-one days quarantine. The Board also decided to remove the quarantine on arrivals from the Island of La Palma (Canaries).

Cuba—Havana.—Three deaths from yellow fever were reported during the week ended April 5, 1889.

Cardenas.—April 12, 1889: "Good health prevails in town and harbor."

Phillipine Islands.—Asiatic Cholera.—Dr. Cyril Williams, secretary health department, San Francisco, Cal., states under date of April 6, that "a large number of deaths from Asiatic cholera are reported by cable as having occurred in the Phillipine Islands."

Mexico—Guaymas.—Twelve deaths were registered during the month of March, 1889, in a population of 5,500. No particular or epidemic sickness. Sanitary condition good.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Mar. 23	5,642,015	1,952	.....	.....	.....	.....	4	7	28	107	.....
London	Mar. 30	5,642,015	1,876	.....	.....	.....	.....	8	14	24	69	.....
Paris	Mar. 30	2,260,945	1,054	.....	.....	4	.....	14	1	52	40	6
Glasgow	Mar. 30	545,678	301	.....	.....	.....	.....	4	1	3	.....	.....
Warsaw	Mar. 23	445,770	238	.....	.....	4	.....	.....	2	7	.....	.....
Calcutta	Feb. 23	433,219	210	26	.....	.....	.....	.....	.....	.....	.....	.....
Calcutta	Mar. 2	433,219	204	27	.....	4	.....	.....	.....	.....	.....	.....
Rome	Feb. 16	401,044	224	.....	.....	1	.....	2	1	7	.....	.....
Rome	Feb. 23	401,044	227	.....	.....	2	.....	2	.....	8	.....	.....
Amsterdam	Mar. 30	399,051	186	.....	.....	.....	.....	1	.....	4	.....	.....
Copenhagen	Mar. 23	307,000	123	.....	.....	.....	.....	1	1	5	.....	.....
Edinburgh	Mar. 9	266,900	119	.....	.....	.....	.....	.....	.....	2	.....	.....
Edinburgh	Mar. 16	266,900	101	.....	.....	.....	.....	.....	1	1	.....	.....
Palermo	Mar. 30	250,000	89	.....	.....	.....	.....	.....	1	3	.....	.....
Genoa	Mar. 30	179,847	109	.....	.....	1	1	.....	.....	1	.....	.....
Toronto	Mar. 23	170,000	42	.....	.....	.....	.....	2	.....	1	.....	.....
Toronto	Apr. 6	170,000	66	.....	.....	.....	.....	2	.....	3	.....	.....
Stuttgart	Mar. 30	125,510	48	.....	.....	.....	.....	.....	2	3	.....	.....
Havre	Mar. 23	112,074	55	.....	.....	1	.....	2	.....	.....	.....	.....
Havre	Mar. 30	112,074	69	.....	.....	3	.....	1	.....	1	.....	.....
Barmen	Mar. 23	109,000	42	.....	.....	.....	1	.....	.....	.....	2	.....
Leghorn	Mar. 31	102,893	53	.....	.....	.....	.....	1	.....	.....	.....	.....
Leith	Mar. 9	76,400	27	.....	.....	.....	.....	.....	.....	1	.....	.....
Leith	Mar. 16	76,400	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Mar. 23	65,028	42	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Mar. 30	65,028	43	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Mar. 24	23,631	15	.....	.....	.....	.....	.....	.....	1	.....	.....
Cartagena, Col	Mar. 16	13,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Feb. 4	1,004	0	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Feb. 11	1,004	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Feb. 18	1,004	0	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Feb. 25	1,004	0	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Mar. 4	1,004	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Mar. 11	1,004	0	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

South Atlantic Quarantine Station—Sapelo Sound, Georgia.—Passed Assistant Surgeon J. H. White, in charge of this station, reports the arrival there, April 10th, of the Swedish ship John Fougt, from Para, Brazil, in ballast, bound for Brunswick, Ga. There were five cases and three deaths from yellow fever on the passage, the last one on the 3d instant. She brings a clean bill of health from Para, and the captain says, "No fever in Para." The quarantine officer states that "the vessel is twenty years old, and I am of the opinion that she is in herself infected, and that yellow fever will recur on her as soon as the moisture, heat, and dirt required are provided. I have advised her departure for Canada or other extreme northern port, as I consider her unfit to enter any port which could, under any circumstances, be infected." The vessel has been fumigated, and will be held in quarantine for observation.

Sanitary Inspection of Punta Rassa, Fla.

JACKSONVILLE, FLA., *April* 11, 1889.

SIR: I have, in accordance with your instructions dated April 3, inspected Punta Rassa, situated on the gulf coast of Florida, 65 miles south of Punta Gorda. This is a small hamlet opposite Sanibel Island, with a population of about 25 souls, and the only traffic carried on is the shipment of cattle by schooners and sailing vessels to Havana and Key West. There was no sickness (yellow fever) here last summer, and none at the time of my visit; and this point having no communication by rail with the State would not become a source of very great danger upon the introduction of yellow fever. The establishment of a quarantine station at Boca Grande Pass, which commands the entrance of Charlotte Harbor, would afford protection against vessels of small tonnage plying between Havana and Punta Gorda, and such a measure is greatly to be desired. Very respectfully,

To Surgeon-General HAMILTON, J. L. POSEY, M. D.
United States Marine-Hospital Service.

California—San Francisco.—Month of March, 1889. Estimated population, 330,000. Total deaths, 479, including croup, 4; diphtheria, 8; erysipelas, 1; enteric fever, 8; leprosy, 1; measles, 1; whooping-cough, 1; scarlatina, 2.

Missouri—Saint Louis.—Month of March, 1889. Estimated population, 440,000. Total deaths, 722, including measles, 21; scarlatina, 1; diphtheria, 36; croup, 8; whooping-cough, 14; enteric fever, 6; cerebro-spinal fever, 1; erysipelas, 4.

Ohio—Cincinnati.—Month of March, 1889. Estimated population, 325,000. Total deaths, 533, including croup, 8; cerebro-spinal meningitis, 8; diarrhœa, 4; diphtheria, 25; erysipelas, 6; measles, 2; scarlatina, 1; enteric fever, 10; and whooping-cough, 2.

Michigan—Detroit.—Month of March, 1889. Estimated population, 230,000. Total deaths, 284, including croup, 6; diarrhœa, 2; diphtheria, 9; erysipelas, 3; enteric fever, 3; measles, 1; whooping-cough, 3; scarlatina, 4.

Grand Rapids.—Month of March, 1889. Estimated population, 75,000. Total deaths, 73, including croup, 1; diphtheria, 3; scarlet fever, 2.

Minnesota—Minneapolis.—Month of March, 1889. Estimated population, 180,000. Total deaths, 119, including enteric fever, 7; diphtheria, 18; scarlet fever, 2.

New York—Rochester.—Month of March, 1889. Estimated population, 120,000. Total deaths, 177, including croup, 6; diarrhœa, 1; diphtheria, 9; erysipelas, 2; enteric fever, 1; and whooping-cough, 6.

Massachusetts—Worcester.—Month of March, 1889. Estimated population, 82,000. Total deaths, 143, including diphtheria, 1; enteric fever, 1; and measles, 3.

Texas—San Antonio.—Month of March, 1889. Estimated population, 50,000. Total deaths, 88, including diphtheria, 2; dysentery, 1; erysipelas, 1; enteric fever, 3.

New Hampshire—Manchester.—Month of March, 1889. Estimated population, 42,000. Total deaths, 56, including croup, 2; diphtheria, 1; enteric fever, 1.

Iowa—Davenport.—Month of March, 1889. Estimated population, 33,715. Total deaths, 31, including croup, 1; diphtheria, 4; dysentery, 1.

Tennessee—Chattanooga.—Month of March, 1889. Estimated population, 40,000. Total deaths, 59, including croup, 2; diarrhœa, 3; erysipelas, 1; enteric fever, 3.

Rhode Island—Newport.—Month of March, 1889. Eitimated population, 22,000. Total deaths, 38, including croup, 1; diphtheria, 3; diarrhœa, 1.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Apr. 13	1,561,708	861	.....	.....	.....	.....	.....	.....	5	53	61	19	21
Philadelphia, Pa.	Apr. 13	1,040,245	421	.....	.....	.....	.....	.....	.....	11	5	5	.....	3
Chicago, Ill	Apr. 13	830,000	280	.....	.....	.....	.....	.....	.....	3	8	19	7	1
Brooklyn, N. Y.	Apr. 13	821,525	384	.....	.....	.....	.....	.....	.....	.....	13	25	14	3
Baltimore, Md	Apr. 13	500,343	157	.....	.....	.....	.....	.....	.....	.....	3	3	.....	1
San Francisco, Cal.	Apr. 5	330,000	102	.....	.....	.....	.....	.....	.....	5	1	3	.....	.....
Cincinnati, Ohio	Apr. 13	325,000	120	.....	.....	.....	.....	.....	.....	5	3	9	1	.....
New Orleans, La.	Apr. 6	254,000	103	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Cleveland, Ohio	Mar. 23	235,000	76	.....	.....	.....	.....	.....	.....	2	.....	1	.....	1
Cleveland, Ohio	Mar. 30	235,000	88	.....	.....	.....	.....	.....	.....	3	2	3	1	.....
Washington, D. C.	Apr. 16	225,000	104	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	4
Milwaukee, Wis.	Apr. 13	210,000	85	.....	.....	.....	.....	.....	.....	3	5	5	.....	.....
Minneapolis, Minn.	Apr. 6	200,000	48	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Minneapolis, Minn.	Apr. 13	200,000	45	.....	.....	.....	.....	.....	.....	1	2	3	.....	.....
Newark, N. J.	Apr. 16	181,351	90	.....	.....	.....	.....	.....	.....	1	.....	4	.....	1
Kansas City, Mo.	Apr. 6	180,000	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kansas City, Mo.	Apr. 13	180,000	34	.....	.....	2	.....	.....	.....	1	.....	.....	.....	.....
Providence, R. I.	Apr. 13	127,000	53	.....	.....	.....	.....	.....	.....	1	2	2	.....	.....
Rochester, N. Y.	Apr. 13	120,000	35	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	3
Denver, Colo.	Apr. 12	100,000	34	.....	.....	1	.....	.....	.....	.....	1	.....	.....	.....
Toledo, Ohio	Apr. 12	80,000	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Camden, N. J.	Apr. 4	70,000	26	.....	.....	.....	.....	.....	.....	4	.....	1	.....	.....
Camden, N. J.	Apr. 11	70,000	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn.	Apr. 13	65,153	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	Apr. 13	65,000	33	.....	.....	.....	.....	.....	.....	.....	2	.....	3	.....
Charleston, S. C.	Apr. 13	60,145	38	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....
Lynn, Mass	Apr. 13	50,000	21	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Portland, Me.	Apr. 13	42,000	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Apr. 6	42,000	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Saginaw, Mich.	Apr. 13	40,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Apr. 5	40,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa.	Apr. 6	35,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa.	Apr. 13	33,715	9	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Auburn, N. Y.	Apr. 13	26,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Apr. 13	25,000	6	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Newport, R. I.	Apr. 11	22,000	13	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Newton, Mass.	Apr. 13	21,553	3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa	Apr. 13	16,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Apr. 13	15,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Boards of health and health-officers issuing printed documents are respectfully requested to forward a copy to this bureau as soon as issued.

JOHN B. HAMILTON,
Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 17. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., April 26, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended April 26, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended April 6, corresponded to an annual rate of 20.3 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz., 12.9, and the highest in Blackburn, viz., 30.6 a thousand. Diphtheria caused 3 deaths in Manchester, 4 in Salford, 2 in Sunderland, and 3 in Liverpool.

London.—One thousand five hundred and seventy-two deaths were registered during the week, including measles, 74; scarlet fever, 15; diphtheria, 26; whooping-cough, 49; enteric fever, 9; diarrhœa and dysentery, 17. The deaths from all causes corresponded to an annual rate of 18.8 a thousand. Diseases of the respiratory organs caused 364 deaths; different forms of violence, 69; and 10 suicides were registered. In greater London 1,896 deaths were registered, corresponding to an annual rate of 17.5 a thousand of the population. In the "outer ring" the deaths included measles, 4; diphtheria, 4; and whooping-cough, 8.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended April 6, in the 16 principal town districts of Ireland, was 24.6 a thousand of the population. The lowest rate was recorded in Wexford, viz., 4.3, and the highest in Armagh and Limerick, viz., 31.0 a thousand. In Dublin 174 deaths were registered, including whooping-cough, 2; enteric fever, 2; measles, 2; typhus, 1; diphtheria, 1; and erysipelas, 2.

Scotland.—The deaths registered in 8 principal towns during the week ended April 6, corresponded to an annual rate of 21.8 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Greenock, viz., 7.3 and the highest in Glasgow, viz.,

28.8 a thousand. The aggregate number of deaths registered from all causes was 558, including measles, 31; scarlet fever, 1; diphtheria, 8; whooping-cough, 41; fever, 3; and diarrhœa, 6.

BRAZIL—*Rio Grande do Sol.*—The United States consul, in his dispatch to the Department of State, under date of March 8, 1889, says:

In reference to a previous dispatch, number 27, dated at this consulate on the 1st day of March, 1889, I now beg to report that the yellow fever introdued here by immigrants from Rio de Janeiro, has disappeared from the hospital save one case, which is convalescent. The total number of deaths to date is 9, and as the disease did not extend outside of the hospital there is not now the slightest fear of its becoming epidemic.

The provincial government has ordered prompt quarantine of all steamers entering the port of Rio Grande do Sol, from Rio de Janeiro, of ten days, including time occupied in transit, and for the accommodation of all classes of passengers thus detained a station has been arranged just inside the bar, about 9 miles from the city.

In view of the disappearance of the disease and the precautions taken by the authorities to prevent further introduction, I believe I shall be justified in issuing clean bills of health, with a slight explanation as to imported cases until the quarantine is raised, when applied for by masters of ships desiring to enter ports of the United States.

CUBA—*Havana.*—Two deaths from yellow fever were registered during the week ended April 12, 1889.

Santiago de Cuba.—The United States consul reports as follows, under date of April 12, 1889:

The health statistics for the last half of March show a most unlooked-for improvement. Not one case of yellow fever, not even in the military hospital, is registered. The danger of a small-pox epidemic has entirely disappeared, and in a population of 50,000 in this city district of Santiago de Cuba, only 39 deaths are recorded, which were produced by the following diseases:

Consumption	10
Anginas diversas, children	3
Dysentery, children	4
Diarrhœa, children	4
Pernicious fever	1
Tabes mesenterica	4
Lesions of the heart	2
Lesions of the brain	1
Bronchitis	2
Enteritis	4
Old age	4
Total	39

MEXICO—*Acapulco.*—Twenty-four deaths were registered during the month of March, 1889, including dysentery, 1; small-pox, 1; and paludal fevers, 15.

UNITED STATES OF COLOMBIA—*Colon.*—The United States consul, under date of April 16, 1889, reports that 10 deaths were registered

during the week ended that date, including 2 from yellow fever. He says: "The cases of yellow fever here originated in the hospitals, and were strictly sporadic. Not the slightest epidemic. Doctors tell me it is checked, the rain having commenced to cool the atmosphere."

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
London	Apr. 6	5,642,015	1,896	.....	.....	.....	.....	9	17	30	78	.....
Paris	Apr. 6	2,260,945	1,021	.....	.....	3	.....	7	2	38	52	14
Glasgow	Apr. 6	545,678	293	.....	.....	.....	.....	1	1	6	.....	.....
Warsaw	Mar. 30	445,770	190	.....	.....	3	.....	.....	6	6	.....	.....
Calcutta	Mar. 9	433,219	201	41	.....	4	.....	.....	.....	.....	.....	.....
Calcutta	Mar. 16	433,219	194	23	.....	2	.....	.....	.....	1	.....	.....
Rome	Mar. 2	401,044	238	.....	.....	1	.....	1	.....	6	.....	.....
Rome	Mar. 9	401,044	241	.....	.....	4	.....	2	1	6	.....	.....
Amsterdam	Apr. 6	399,051	167	.....	.....	.....	.....	.....	1	4	.....	.....
Munich	Mar. 23	282,000	152	.....	.....	.....	.....	.....	6	10	.....	.....
Munich	Mar. 30	282,000	180	.....	.....	.....	.....	.....	6	11	.....	.....
Edinburgh	Mar. 23	266,900	89	.....	.....	.....	.....	.....	1	1	.....	.....
Edinburgh	Mar. 30	266,900	72	.....	.....	.....	.....	.....	.....	1	.....	.....
Palermo	Apr. 6	250,000	86	.....	.....	.....	.....	.....	2	.....	.....	.....
Belfast	Apr. 6	229,622	115	.....	.....	.....	.....	1	.....	3	.....	.....
Bristol	Mar. 23	229,361	82	.....	.....	.....	.....	1	.....	1	.....	.....
Bristol	Mar. 30	229,361	86	.....	.....	.....	.....	1	.....	.....	.....	.....
Bristol	Apr. 6	229,361	85	.....	.....	.....	.....	2	1	.....	.....	.....
Port of Spain	Mar. 30	178,270	35	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toronto	Apr. 13	170,000	38	.....	.....	.....	.....	1	.....	1	.....	.....
Trieste	Mar. 23	154,500	96	.....	.....	1	.....	.....	.....	1	.....	.....
Trieste	Mar. 30	154,500	78	.....	.....	1	.....	.....	.....	.....	.....	.....
Stuttgart	Apr. 6	123,510	71	.....	.....	.....	.....	.....	1	5	.....	.....
Pernambuco	Mar. 5	110,000	99	.....	.....	.....	2	2	2	.....	.....	.....
Pernambuco	Mar. 12	110,000	99	.....	.....	.....	2	3	2	.....	.....	.....
Pernambuco	Mar. 19	110,000	110	.....	2	.....	1	1	2	.....	.....	.....
Barmen	Mar. 30	109,000	37	.....	.....	.....	.....	.....	1	.....	2	.....
Leghorn	Apr. 7	102,893	37	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	Mar. 23	76,400	27	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	Mar. 30	76,400	25	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Mar. 23	65,801	35	.....	.....	.....	.....	.....	.....	1	.....	.....
Mayence	Mar. 30	65,801	32	.....	.....	.....	.....	.....	.....	2	.....	.....
Gibraltar	Mar. 31	23,631	8	.....	.....	.....	.....	1	.....	.....	.....	.....
Kingston, Can	Apr. 19	17,300	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antigua	Mar. 31	15,847	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antigua	Apr. 7	15,847	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	Apr. 6	15,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Mar. 22	13,500	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Mar. 29	13,500	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Mar. 30	7,428	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Apr. 6	7,428	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	Mar. 27	4,732	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Mar. 18	1,004	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Mar. 25	1,004	0	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

FLORIDA.—The following telegrams have been received from Dr. R. P. Daniel, president State board of health of Florida:

Jacksonville, April 19, 1889.—Report of yellow fever in Jacksonville absolutely false. Health of city decidedly good.

Sanford, April 23, 1889.—Death from yellow fever here. Only case at present. Every precautionary step taken.

Sanitary Inspection of Gainesville, Fla.

GAINESVILLE, FLA., *April* 18, 1889.

SIR: In obedience to your telegraphic order of the 12th of April, I have inspected the city of Gainesville, the county seat of Alachua County, Florida. After a thorough investigation and interview with the principal physicians I found the city entirely free from any infectious or contagious diseases; and a survey of its principal streets (some of which are laid with phosphatic sandstone) in an excellent sanitary condition. The site of the city is on a sandy knoll about 240 feet above sea level, and has a fall from the center to its lower limit of 70 feet north and south side, and 30 feet east and west, and bounded by two large creeks into which the contents of the surface drains are emptied. There are, however, in its corporate limits several low areas which remain yet to be thoroughly drained, and in whose vicinity during the late epidemic the death rate was far greater than in the dry area. I inclose a map, kindly furnished me by Mr. Jos. E. Voyle, marking the infected houses and districts of the city, and the drained and marshy sections, and offer it as an illustration of the striking influence which proper drainage seems to exert upon the type and fatality of yellow fever which prevailed there last September. The partial practice of dumping the refuse and garbage from premises upon the side streets unfortunately prevails, and is unsightly as well as prejudicial to health by its accumulation and slow decomposition. The open-closet system is also, in such a porous soil, a source of contamination of the water supply, and unless the fecal matter is removed and deodorized at short intervals and carried beyond the corporate limits, becomes an additional source of discomfort and danger. I have urged upon the municipal authorities the early introduction of the zinc-pail system for closets, and the erection of a crematorium for the incineration of both dejecta and garbage, which, in view of the sad experiences of the past summer and autumn, it seems would be eagerly adopted without any elaborate argument in favor of the sanitary or economical features of a system which offers such signal advantages to the smaller cities and towns of the South. In lieu of the present dangerous methods of depositing garbage and refuse at various points in the suburbs and in its rapid accumulation at any one spot (one such I noted in the vicinity of the depot of the S. F. W. R. R., where the soil is low and marshy), its complete, quick, and innoxious reduction to a heap of snowy ashes would be effected at a cost so low as to be but a very slight burden to the municipal taxpayer. There seems to have existed a wide discrepancy of opinion in connection with the origin of the epidemic of yellow fever which occurred here last September. The official inspection which I made at this place on September 2d, 1888, revealed a condition of complete immunity from any infectious disease; and for several months prior, upon the statement of reputable resident practitioners, no town in the State was healthier. The Gainesville Guards, a military company, was ordered by Governor Perry to proceed on September 6th to Fernandina to aid in quelling a labor riot in progress at that city. They took an active part in the matter, were very much exposed at night and to the inclement weather which prevailed during their sojourn, and returned to their homes in Gainesville on the 11th of September, 1888. A number of these Guards shared the hospitality of a Captain Howell, of Fernandina, whose wife was sick at the time with what proved to be yellow fever, and on the 12th of September Lieutenant Evans, of the Guards, and private Jeff.

Hodges were taken sick with "the fever;" and on the 13th and 14th of September Willie Wilson, Joe Waugh, Ben Miller, John Ammons and Fitch Miller, all members of the same company, fell victims to the disease. The rapid occurrence of these cases, all presenting the same symptoms in a well-marked manner, enabled their medical attendants to announce on the night of the 16th that yellow fever was epidemic in their city. I am confident that this is the correct account of the origin of the epidemic of yellow fever that prevailed here last September, and but for the untimely action of the health authorities in admitting the Guards on their return without detention the fatal results of panic, death, and business depression would not have followed.

Very respectfully,

J. L. POSEY, M. D.,
United States Sanitary Inspector, Marine-Hospital Service.

To Surgeon-General HAMILTON,
United States Marine-Hospital Service.

The following are the rules and regulations of the State board of health of Florida, approved April 6, 1889:

In pursuance of an act of the legislature of the State of Florida, entitled "An act to create and establish a State board of health," approved February 20, 1889, the State board of health hereby announces the following rules and regulations for the preservation of the public health in the State of Florida.

Powers and functions of the health officers of the board.

SECTION 1. That whenever the State health officer shall proceed to any portion of the State under section 9 of the act to create and establish a State board of health, he is authorized to make such quarantine and sanitary regulations as may be immediately needed to prevent the spread of the disease there prevailing, not inconsistent with said act or the rules and regulations of this board, and not already provided by this board, and he shall immediately report the same to the president of this board for approval.

SEC. 2. That whenever the State health officer shall visit any city or town under section 12 of the act to create and establish a State board of health, and shall there discover any property or thing necessary to be condemned and destroyed under said section of said act, he is authorized to make such valuation and condemnation as is provided by said act, and shall make immediate report of same to the president of the board, or to the board if in session, and if approved the said property or things shall be destroyed as provided in said section of act, and compensation made for same as provided in said section.

SEC. 3. That the State health officer is hereby authorized to appoint and employ, with the approval of the president of this board, such sanitary port inspectors, sanitary guards, and such other persons, as may be, from time to time, required for the prevention of the introduction of disease into the State, and for the preservation of the public health. Such inspectors, guards, and other persons, to be employed only for such time as their services may be necessary, and to be subject to removal at the pleasure of the State health officer or president of the board. Said inspectors, guards, and other persons, so employed, to be paid, according to their respective capacity, and the nature of

the service to be rendered, such compensation (to be agreed upon at the time of employment) as the State health officer and president of the board consider just and reasonable.

Municipal sanitation.

SECTION 1. All cities and towns of over 10,000 inhabitants shall be provided with a system of sewerage, and sufficient means for the proper collection and disposal of the filth, garbage and refuse of every description, in such cities and towns; and all cities, towns or settlements, under 10,000 inhabitants, having no system of sewerage, shall be provided with sufficient other means for the prompt, frequent and sanitary collection and disposal of all filth, refuse and garbage of every description, in such cities, towns and settlements. The proper municipal authorities of incorporated cities and towns, and the county boards of health, where such exist, or the county commissioners, where no county boards of health exist, in cases of unincorporated towns, hamlets or villages, shall see that such system of sewerage and means of collecting and disposing of filth, refuse and garbage are so provided, under penalties prescribed in section 15 of said act creating and establishing a State board of health, above referred to.

SEC. 2. That the city council, board of aldermen, or municipal authorities, charged by law with such duties, of all incorporated cities and towns in this State, and the county boards of health, where such exist, or the county commissioners, where no county boards of health exist, in cases of unincorporated towns and settlements, shall provide for a house-to-house inspection of all towns within the limits, or under the control of such cities, towns or settlements, at least once a month, and that this may be done efficiently, it is also ordered by the State board, that blanks for this purpose, as prescribed by this board, shall be used, setting forth the number of inmates of the house of each sex and color, whether any sickness exists in the house at the date of inspection, or since last inspected, and the nature of such sickness in either case, and the general sanitary condition of the interior of the house and premises; especial note being made of the condition of the water-closets, cess-pools, sinks or privy vaults; and the mayors of all incorporated cities and towns, and the presidents of county boards of health of those towns not incorporated, where such exist, or presidents of boards of county commissioners, where no county boards of health exist, are especially charged with the enforcement of this rule.

SEC. 3. That no dumping ground for refuse of any description shall be maintained at or near any city, town or settlement in this State; and it is hereby made the duty of every mayor of a city, or president of the board of county commissioners, to promptly abate such a nuisance by fire (if any now exist), in cities, towns or settlements under their jurisdiction; and to prevent the accumulation of refuse and garbage in such quantities as will threaten the health and lives of the citizens thereof.

SEC. 4. The mayors of all incorporated or chartered cities and towns in the State, and the presidents of county boards of health, and the chairmen or presidents of boards of county commissioners of counties not having boards of health, shall make special reports during the months of May, June, July, August, September and October, 1889, to the president of the State board of health, on the sanitary condition of the cities and towns, or counties under their jurisdiction.

Communicable diseases of an epidemic, infectious, or contagious nature.

SECTION 1. Whenever any physician shall know that any person whom he is called to visit, or who is brought to him for examination, is infected with yellow fever, small-pox, cholera, diptheria, scarlet fever, or any other disease dangerous to the public health, he shall immediately give notice thereof, in the manner provided by the statute, to the president of this board of health, and to the health authorities of the city, town or settlement in which the sick person may be; and it shall be the duty of any health officer, or person acting as such, or the president of any board of health, or the mayor of a city or town, to whom any disease dangerous to the public health is reported, to make effectual provision, before the arrival of the health officer of the State, in a manner in which he shall judge best for the safety of the inhabitants; by removing such sick or infected person to a separate house, if it can be done without danger to his life, and by taking such immediate measures as may be necessary to protect the public health.

SEC. 2. It is hereby made the duty of the common council, board of aldermen, or other officers of a chartered city or town in this State, or of every county board of health, to provide for the vaccination and revaccination of the citizens residing in their several cities and counties. And it is also made the duty of every parent, guardian or other person charged with the care of, or responsible for, any child, to see that said child is vaccinated, if it has not already been, within sixty days from the publication of this regulation, and to have said child or children vaccinated as often as the health authorities of a city or town, or county board of health in the State, may direct. Provided, in any case, in the judgment of a reputable physician, expressed in writing, such vaccination would be dangerous to the health of the person required to be vaccinated, such vaccination shall not be required to be made; and provided further, that fresh bovine virus only shall be used in vaccinating in this State.

SEC. 3. After October 1, 1889, superintendents of all institutions of learning, and all school boards and principals of schools in this State, are forbidden to admit as a pupil, any child or person who has not been successfully vaccinated, and shall require a certificate, signed by some competent physician, that said child or person has been successfully vaccinated within five years from the date of application for admission to said school, academy or institute.

SEC. 4. No owner or manager of any manufactory in this State, shall admit for employment any person who cannot produce satisfactory evidence of having been successfully vaccinated within five years before date of employment in such manufactory.

Collection of Vital Statistics.

The city council of every incorporated city, through its proper officer, and every county board of health, having jurisdiction over non-incorporated towns, shall collect and transmit to the secretary of the State board of health, on the first day of each month, a report of the month previous, of the vital statistics of the several cities, towns, and settlements in the State, as are severally within the control of each of said authorities, with a statement of the prevailing diseases during the previous month; and also any other information of a medical or san-

itary nature that may be of value in the preservation of the public health.

(N. B. Blanks suitably prepared for the purposes of these observations and reports will be furnished free on application to the secretary of the State board of health.)

Public Institutions.

The superintendents of all State institutions of learning, or for the care of the afflicted; sheriffs of counties; the superintendent of the State prison, or penitentiary; or other person having the care or custody of prisoners or convicts, shall report to the secretary of the State board of health on the first day of each month, on blanks to be furnished, such information of a medical or sanitary nature as may be of value in the preservation of the public health.

Quarantine and Maritime Medical Inspection.

SECTION 1. The quarantine and sanitary inspection system over travel and commercial intercourse, between any of the ports of the State of Florida, and any West Indian, South American, or other foreign port, or domestic port in the United States, where any epidemic disease may prevail, shall be established and maintained for such seasons of the year, and for such periods, as may be determined by the State board of health.

SEC. 2. No steamship, or other vessel, plying between any foreign port, or domestic port of the United States where epidemic disease exists, and any of the ports, harbors or inlets of the State of Florida, shall be permitted to enter any such ports, harbors, or inlets of the State of Florida, without permission from the State board of health of Florida, and under such restrictions and regulations as to medical and sanitary inspection as the State board may hereinafter, and from time to time, prescribe; and every master, or person in charge of any such steamship, or other vessel, coming from any such foreign or domestic port where epidemic disease exists, into any Florida port, harbor, or inlet, in violation of the regulations of this board, or without the permission of this board, shall be subject to the penalties of section 15 of the act creating and establishing this board.

SEC. 3. All vessels, of whatsoever class and description, arriving at any of the ports of the State of Florida, between the 15th of April and the 30th of November of each year, must lie to, or anchor, at a point to be designated in each harbor as the inspecting point, and marked by a buoy with a yellow flag thereon, and there remain until inspected by the sanitary inspector of the port, appointed by this board, or appointed by the county board of health with the approval of this board; and if said vessel is free from sickness of every kind whatsoever, and has had no infectious or contagious disease on board during any part of the voyage subsequent to leaving the last port, or for three months prior thereto; and, furthermore, if the vessel is in a cleanly and sanitary condition, then the said sanitary inspector at the port of arrival shall give permission for said vessel to enter said harbor, and proceed to an anchorage or a dock. Provided, however, that county boards of health may adopt rules and regulations, subject to the approval of the State board of health, for the control and government of pilot boats, fishing boats, wrecking boats, wood boats, and vessels engaged in the sponge business.

Pilots must, and hereby are required, in each case, before boarding a vessel desiring to enter any of the ports, harbors, or inlets of the State of Florida, to make inquiry as to the sanitary condition of the vessel, and in no case must they "board" if the vessel has contagious or infectious sickness on board, or has had the same during the voyage. In all such cases the pilot must direct said vessel to the nearest United States quarantine or refuge station, and pilots are forbidden from leaving any vessel which they have boarded until permission is granted by the port sanitary inspector, acting under authority of this board or of county boards of health.

SEC. 4. No vessels of any class or description having epidemic, contagious, or infectious disease on board, or having had such during any portion of the voyage, or for six months prior thereto—if said vessel has been continuously in the southern waters of the United States for that period—shall be permitted to land any passengers or crew, or to load or discharge cargo or ballast, or to hold any communication with any other vessel or person, or the shore, except under the supervision and direction of the health officer of this board, or of the port sanitary inspector appointed by this board or by the county board of health; and any captain of any such vessel attempting to do so shall be subject to the penalties prescribed for violation of the regulations of this board.

SEC. 5. No quarantine regulations of commerce or travel (sea coast or inland), shall be instituted or operated by any port, place, or county in this State, except by permission of the State board of health, as hereinafter provided.

SEC. 6. County boards of health, of counties bordering on the sea coast of the State of Florida, can establish such a system of inspection, disinfection and quarantine of detention against foreign infected ports, or infected ports and places in the United States, or places suspected to be infected, as do not conflict with any of the provisions of section XI of the act creating a State board of health, or any of the rules and regulations of the State Board that have been, or may hereafter be, adopted and ordered; and said county boards of health are hereby permitted to collect and receive from vessels arriving at their ports in their several counties from foreign infected ports, or infected ports in the United States, or ports suspected as infected, or from vessels with unclean ballast not in a good sanitary condition, at any season of the year, and from all vessels arriving at any of the ports in their several counties between April 15th and the 30th of November of each year, such fees for the service of medical inspection, disinfection, and fumigation of said vessels or their cargoes, or the discharge of ballast, as may be reasonable and necessary, and which may not be in conflict with the State or United States laws governing commerce: *Provided*, That when and where such fees for services above specified are demanded and collected from the vessels of the class before enumerated, then all the expenses incident to the establishment and maintenance of said quarantine or medical inspection, such as the services of a Port Sanitary Inspector and the necessary quarantine station, and needful appliances for steam and vapor disinfecting purposes for baggage of passengers or cargoes of vessels, and vessels themselves, and for the proper care of those detained in quarantine, must be paid for from the fund accruing from the collection of fees of inspection and disinfection of vessels and discharge of ballast, and no portion of this expense will be assumed or paid for by the State Board of health, except in those cases where the revenue derived by any county board of health from fees authorized as above

is insufficient to defray all the necessary expenses of maintaining said quarantine.

SEC. 7. In accordance with the requirements of section XI of the act creating a State board of health, the following restrictions and regulations, as to inspection and sanitary requirements, are hereby provided, to be observed by all steamships and other vessels plying between foreign ports, or domestic ports of the United States that may be deemed by this board of health as infected by yellow fever, cholera, or smallpox, and any of the ports, harbors, or inlets of the State of Florida and seeking to enter any such ports, harbors, or inlets of the State of Florida:

(*a.*) Such steamships or other vessels must carry as ballast either water or clean rock or stone. If water ballast is used it must not be changed either in any foreign port or any port in the State of Florida, but in the open sea. If rock or stone ballast is used it must be procured from some non-infected port in the United States.

(*b.*) Steamships or other vessels plying between foreign ports and the ports, harbors, or inlets in the State of Florida, and seeking to enter such Florida ports, harbors, or inlets, must be provided with crews acclimated to yellow fever; and between the 15th of April and 30th of November of each year such steamship or other vessel plying as aforementioned, and especially between any of the ports of the island of Cuba and the ports of Florida, must not enter any of the ports of the island of Cuba before sunrise, and must depart therefrom before sunset of the same day, and, between the dates above specified, must not remain over night in any harbor of the island of Cuba, otherwise they will be subjected to detention in quarantine at any of the ports of the State of Florida for fifteen days.

(*c.*) Steamships or other vessels plying between the ports of the Island of Cuba and any ports in the State of Florida, and seeking to enter such Florida ports, harbors, or inlets, must not anchor, but moor in the open harbor of any of the ports in the island of Cuba, and as far as possible from any other vessels; and while in said harbors must not, between the dates before mentioned, hold communication with the shore, except under conditions and restrictions imposed by an agent of this board in said port or harbor.

(*d.*) Steamships or other vessels plying between the ports of the State of Florida and any West Indian, South American, or other foreign port, must be kept in a cleanly and sanitary state at all times, and be subject to inspection by this board of health, and must have their bilges pumped out and thoroughly washed and cleaned at least twice a week with some powerful germicide and disinfectant (which will be designated by the health officer of this board); and it is hereby made the duty of all port sanitary inspectors of this board, or of county boards of health, to pay especial attention to this sub-division of section 7, and to observe, on the arrival of any steamship or other vessel of any line operating or plying between the ports as before mentioned, the condition of the cabins, state-rooms, the steerage, forecastle, and water-closets, and to promptly report to the health officer of this board, and to the president of the county board of health for the county in which such port is situated, any deviation from perfect cleanliness, as exacted by this rule, and also to promptly place in quarantine, for the purpose of being disinfected and cleaned, any steamship or other vessel whose sanitary condition is not good and does not fulfill the requirements as established by the State board of health, and said steamship

or vessel shall not be released from quarantine until she has been placed by her officers in a cleanly and sanitary state.

SEC. 8. Steamships or other vessels plying between any West Indian, South American, or other foreign port and any ports in the State of Florida, between the 15th of April and the 30th of November of each year, shall not be permitted to bring as passengers from any such ports where endemic or epidemic contagious or infectious diseases exist, to any port in the State of Florida, any person who is not acclimated to yellow fever by having had an attack of the disease, or by continuous residence in cities and towns, for a period of ten years or over, where such disease is endemic, and has not had either small-pox or been successfully vaccinated; and masters of such steamships or vessels shall not receive for transportation any passengers without a certificate from an agent of this board in said port, stating the exemption of said passenger from contracting or developing yellow fever, cholera, or small-pox, and his or her practical acclimation, which certificate, together with another setting forth the freedom of baggage from contagious or infectious disease, must be produced to the port sanitary inspector at the port of arrival in this State before pratique can be given to said vessel or passenger. And the master of any steamship or other vessel failing to observe this rule, and who shall attempt to transport passengers in defiance thereto, will subject himself, ship or vessel, crew and passengers, to such quarantine and to such requirements of detention and disinfection as this State board may, through the county board of health, direct; and, in addition to the foregoing, every master of steamships or other vessels violating this rule will be prosecuted in the courts of the State, as specified in section 15 of the act creating a State board of health.

SEC. 9. No bedding or household goods shall be brought from any port of the West Indies, South American, or other foreign ports that may be infected with an epidemic, contagious, or infectious, disease, or from any infected port or place of the United States, to any port or place in the State of Florida, at any season of the year; and the master of any steamship or other vessel, or any transportation company who disobeys this regulation shall be deemed guilty of violating this rule, and shall be dealt with as contemplated by section 15 of the act creating a State board of health.

SEC. 10. No personal baggage of the description usually carried in trunks shall be landed at any of the ports or harbors or places in the State of Florida, from any port of the West Indies, South America, or other foreign port, any port or place in the United States where yellow-fever, cholera, or small-pox prevails, between the dates of April 15th and November 30th of each year, without being subjected to thorough disinfection by superheated steam, dry heat of high temperature, or medicated vapor, according to the nature of the fabric, and no personal baggage of passengers arriving at any of the ports or places in the State of Florida, as above specified, and between the dates above specified, shall be permitted to be transported into the State of Florida, or into any of the cities, towns, or settlements of the State, that has not been properly and sufficiently disinfected according to the rules describing the system to be hereafter adopted, and to be hereafter promulgated by this board. Said personal baggage of passengers from foreign ports that are infected with any epidemic, contagious, or infectious disease, or from any port or place in the United States likewise affected, after being disinfected, must have attached a certificate from

the port sanitary inspector performing the service that such disinfection has been properly and amply performed, else said baggage will not be allowed to enter into or be transported through the State of Florida: *Provided*, That this rule shall not apply to baggage of passengers for points north of 38° 54′ north latitude (Washington, D. C.), and checked through according to regulations to be prescribed by the county boards of health and approved by this board; and provided further, that county boards of health are permitted to exact disinfection and fumigation of baggage arriving from infected ports or places during the entire year.

SEC. 11. No decayed or tainted fish, fruit, or vegetables will be permitted to be landed at any of the ports or harbors in the State of Florida at any season of the year, and any attempt to do so will subject fish, fruit, or vegetables to destruction, and the master of the vessel bringing the same to prosecution in the courts of the State for violating this rule.

SEC. 12. No cargo consisting of green salted hides, bone, bone-dust, or guano, or fertilizers of any kind that have become damaged by water, so as to be offensive and detrimental to the public health, shall be permitted to be discharged or landed on any wharf or dock of any city or town in the State, or in any settled port thereof.

SEC. 13. It is hereby made the duty of all mayors of towns and cities in this State, and of the county boards of health, to enforce the observance of these rules and regulations in the several cities and towns and counties that are under their control.

Adopted by the State board of health and ordered printed in pamphlet form, this sixth day of April, one thousand eight hundred and eighty-nine.

R. P. DANIEL, M. D.,
President State Board of Health.

JOSEPH Y. PORTER, M. D.,
Secretary and Health Officer of the Board.

Forms for reports called for in the above rules and regulations will be supplied free on application to the State board of health.

JOSEPH Y. PORTER, M. D.,
Secretary State Board of Health.

PROCLAMATION BY THE GOVERNOR OF THE STATE OF TEXAS.

To all whom these presents shall come:

Whereas it has come to my knowledge that yellow fever, cholera, and small-pox exists in many places which are in mercantile connection with our ports of entry;

Now, therefore, I, L. S. Ross, Governor of Texas, by virtue of the power in me vested, do hereby declare a quarantine of twelve days at the port of entry against all points or ports that are now or may become infected with cholera, yellow fever, or small-pox.

This quarantine to be governed by subjoined rules, and to take effect from May the first, 1889.

In testimony whereof, I hereto sign my name, and have caused the seal of State to be hereon impressed, at the city of Austin, this 12th day of April, A. D. 1889.

[SEAL.] L. S. ROSS, *Governor.*

By the Governor: J. M. MOORE, *Secretary of State.*

COAST QUARANTINE STATIONS.

General Rules.

No. 1. After the declaration of quarantine by the governor, every vessel, before entering any port upon the coast of Texas, shall be boarded by quarantine officers, and the crew and passengers be subjected to such questions by said officers as will be necessary to determine their probable connection with epidemic influence or infectious diseases.

No. 2. Vessels hailing from infected districts, or having communicated with others from such districts, by contact or otherwise, shall be placed in quarantine, casting anchor at such place or places as may be designated by quarantine officer of port, and a complete list of both crew and passengers taken. Notice in writing shall be given captains, holding them responsible for strict non-communication of both passengers and crew with other vessels, or with any one from shore. Violation of this rule shall be punished by fine against vessel and captain, not less than $500, or more than $1,000.

No. 3. From the masts of all vessels in quarantine shall be displayed a yellow flag, of such dimensions as to warn off others approaching.

No. 4. All vessels held in quarantine shall be under the direction of port quarantine officer, and put in thorough sanitary condition by fumigation of hold, washing decks with disinfecting fluids, and purifying bilges, etc.

No. 5. Costs of fumigation, disinfection, etc., shall be at expense of vessels.

No. 6. A complete muster of crew and passengeas must again be taken before vessels are given free *pratique;* and a concise report made to State health officer. No vessel shall be finally released without permission of State health officer.

No. 7. Families of quarantine officers will not be allowed at stations without special permission from State health officer during the existence of quarantine.

Pilots.

Pilots will not be allowed to visit, or board, or communicate with any vessels without the permission of port quarantine officer, under penalty of forfeit of their commissions as such.

Market vessels.

Market vessels—meaning those which belong at the port and which furnish daily supplies to vessels at anchor or in quarantine—shall in every instance apply to quarantine officer for permission before attempting to trade or communicate with such vessels; and in case of violation of this rule shall themselves be placed in quarantine and held, at discretion of officer in charge.

Vessels with cargo to be disinfected.

Any vessels from infected districts which may desire to enter such cargo shall upon arrival at outer bar make known their intention to quarantine officer. Quarantine officers receiving this cargo at quarantine-warehouse shall employ as far as possible only acclimatized men, and said employés shall be kept under quarantine themselves a sufficient number of days to determine their probable infection, their

clothing and other articles capable of conveying infection be subjected to a high temperature, say 220° Fahr., before being allowed to return to cities or shore. The crews of said vessels shall be subject to rules as above, and such other precautions as may be deemed requisite at the time by State health officer. Costs in this instance, as in others, are chargeable to owners of cargoes.

Officers.

An inventory of all articles belonging to State, at all the stations, shall be taken at the opening and closing of quarantine, and reported to State health officer, who shall hold the officers of stations to strict account of their care and preservation.

Article 403 *b*. Any health officer, guard, or other employé who shall knowingly and wilfully disobey or in manner knowingly neglect or fail to perform any duty imposed upon him by the provisions of quarantine laws, rules, and regulations of this State, or who shall disobey knowingly an order emanating from superior authority, shall be fined, upon conviction by a court of competent jurisdiction, in a sum not exceeding one thousand dollars: *Provided*, That in the meaning of this article the governor and State health officer shall alone be deemed superior authority. (Laws 1883, p. 81.)

Drunkenness, or other misdemeanors unbecoming the gentleman, while on duty, will meet with severe reprimand, and a repetition cause discharge from the service.

Weekly reports of the transactions of quarantine at each port shall be made to State health officer at Houston.

R. RUTHERFORD,
State Health Officer.

Approved:
L. S. ROSS, *Governor.*

RULES FOR BORDER QUARANTINE STATIONS.

Passengers.

No. 1. Before any train, or other vehicle of transportation, be allowed to pass into Texas from adjoining States or Territories, a thorough canvass shall be made by quarantine officer of passengers thereon, and each and every one shall state under oath as to their whereabouts for at least twenty days previous to arrival at Texas State line; and all incapable, by reason of their having been in infected districts, or refusing to comply with the requirements, shall be placed in quarantine and held at discretion of State health officer.

Baggage.

No. 2. All baggage suspected of having been subjected by contact or otherwise with infectious matter shall, before release from quarantine, be disinfected by fumigation, or heat to 220° Fahr.

Express Freight.

No. 3. No freight by express shall be allowed entrance that is not accompanied by sworn and sealed affidavit stating that it has not been in any place infected prior to its shipment to Texas.

Mails.

No. 4. Mails, from whatever source, shall be thoroughly fumigated with chlorine or sulph. acid gas, under personal supervision of quarantine officer.

Officers.

No. 5. All officers, when once placed on duty, shall not leave their respective stations without permission of State health officer.

Freights.

No. 6. Freights, upon other than passenger trains, shall be classified by State health officer as to their susceptibility for conveying infection, and be passed under special regulations hereafter to be given.

Families of Border Officers.

No. 7. Families of border quarantine officers will not be allowed at stations, and strict non-communication be maintained with all others in vicinity of stations.

R. RUTHERFORD,
State Health Officer.

Approved:
L. S. ROSS, *Governor.*

QUARANTINE RULES.

OFFICE STATE HEALTH OFFICER,
Houston, Texas, April 8, 1889.

From and after the 12th of April all sleeping-cars with their crews on the Texas side of the Rio Grande River must remain. Those on the Mexican side must not cross the Rio Grande River without special permission from this office.

A correct list of all conductors, porters, and tenders whatsoever must be sent to this office at once.

It is respectfully suggested that all employés upon these vehicles or lines be vaccinated.

R. RUTHERFORD,
State Health Officer.

Approved:
L. S. ROSS, *Governor.*

MICHIGAN.—Reports to the State board of health, Lansing, from fifty observers, in different parts of the State, indicate that for the week ended April 13, 1889, "puerperal fever increased, and tonsilitis, whooping-cough, pneumonia, and bronchitis decreased in area of prevalence." Diphtheria was reported during the week ending April 13, and since, at fourteen places. Scarlet fever, at twenty-three places; enteric fever, at three places; measles, at five places; small-pox, at one place (Detroit). Small-pox has disappeared from London township.

ALABAMA—*Mobile.*—Month of March, estimated population 40,000. Total deaths, 64; including whooping-cough, 1; erysipelas, 1; congestive fever, 2; enteric fever, 2.

CALIFORNIA.—Reports to the State board of health, Sacramento, from sixty-five cities and towns having an estimated population of 724,500, indicate that during the month of March, 1889, there were 907 deaths from all causes, including consumption, 157; diarrhœa and dysentery,

2; diphtheria, 23; croup, 7; scarlet fever, 8; measles, 5; whooping cough, 4; enteric fever, 18; and erysipelas, 3. Reports from seventy-nine localities show a remarkable absence of any epidemic, or of any very prevalent disease, excepting pneumonia, bronchitis, and influenza, which were very general in their diffusion, but of a mild type and sporadic character.

CONNECTICUT.—Reports to the State board of health, New Haven, from one hundred and sixty-seven towns, having an estimated population of 758,662, for the month of March, 1889, show that there were 1,049 deaths from all causes, including scarlet fever, 7; measles, 6; cerebro-spinal fever, 16; diphtheria and croup, 74; whooping-cough, 11; enteric fever, 16; and diarrhœal diseases, 11. Scarlet fever was reported in eight towns; measles, in eight; diphtheria and croup, in thirty-one; whooping-cough, in thirteen; and enteric fever, in twelve.

PENNSYLVANIA—*York.*—Month of March, 1889. Estimated population 20,545. Total deaths 34, including diphtheria, 2; and scarlet fever, 1.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Apr. 20	1,562,580	868	.....	.....	.....	.....	.....	.....	5	57	44	13	14
Chicago, Ill	Apr. 20	830,000	253	.....	.....	.....	.....	.....	.....	5	3	24	5	2
Brooklyn, N. Y.	Apr. 20	821,525	365	.....	.....	.....	.....	.....	.....	1	10	20	5	7
Baltimore, Md	Apr. 20	500,343	145	.....	.....	.....	...	.....	.....	4	1	5	.....	1
San Francisco, Cal.	Apr. 12	330,000	87	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....
Cincinnati, Ohio	Apr. 20	325,000	148	.....	.....	.....	.....	.....	.....	6	1	7	2	1
New Orleans, La.	Apr. 13	254,000	97	.....	.....	.....	.....	.....	.....	1	1	2	1	.....
Detroit, Mich.	Apr. 13	250,000	56	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2
Louisville, Ky.	Apr. 13	227,000	71	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	5
Louisville, Ky.	Apr. 20	227,000	67	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2
Washington, D. C.	Apr. 20	225,000	91	.....	.....	.....	.....	.....	.....	1	1	4	.....	2
Milwaukee, Wis.	Apr. 20	210,000	61	.....	.....	.....	.....	.....	.....	2	2	2	.....	.....
Kansas City, Mo.	Apr. 20	180,000	36	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Rochester, N. Y.	Apr. 20	130,000	35	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	2
Providence, R. I.	Apr. 20	127,000	50	.....	.....	.....	.....	.....	.....	2	1	1	.....	.....
Denver, Colo.	Apr. 19	100,000	15	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Richmond, Va.	Apr. 13	100,000	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toledo, Ohio	Apr. 19	83,500	17	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Nashville, Tenn.	Apr. 20	65,153	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	Apr. 20	65,000	31	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Lynn, Mass	Apr. 20	50,000	11	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Portland, Me.	Apr. 20	42,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Apr. 13	42,000	12	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Binghampton, N. Y.	Apr. 6	30,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Binghampton, N. Y.	Apr. 13	30,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghampton, N. Y.	Apr. 20	30,000	16	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Altoona, Pa	Apr. 13	30,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Apr. 20	26,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Apr. 20	25,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Newport, R. I.	Apr. 18	22,000	5	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Newton, Mass.	Apr. 20	21,553	7	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 18. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., May 3, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended May 3, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended April 13, corresponded to an annual rate of 19.9 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Berkenhead, viz., 13.7, and the highest in Preston, viz., 31.0 a thousand. Diphtheria caused 3 deaths in Birmingham.

London.—One thousand four hundred and ninety-three deaths were registered during the week, including measles, 72; scarlet fever, 13; diphtheria, 36; whooping-cough, 43; typhus, 1; enteric fever, 10; diarrhœa and dysentery, 11. The deaths from all causes corresponded to an annual rate of 17.9 a thousand. Diseases of the respiratory organs caused 294 deaths. In greater London 1,845 deaths were registerd, corresponding to an annual rate of 17.1 a thousand of the population. In the "outer ring" the deaths included measles, 12; diphtheria, 6; and "fever," 4.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended April 13, in the 16 principal town districts of Ireland, was 22.9 a thousand of the population. The lowest rate was recorded in Sligo, viz., 4.8, and the highest in Armagh, viz., 36.1 a thousand. In Dublin 174 deaths were registered, including whooping-cough, 7; enteric fever, 2; measles, 10; and diarrhœa, 2.

Scotland.—The deaths registered in 8 principal towns during the week ended April 13, corresponded to an annual rate of 23.0 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Edinburgh, viz., 14.8, and the highest in Glasgow, viz., 28.9 a thousand. The aggregate number of deaths registered from all causes was 588, including measles, 27; scarlet fever, 2; diphtheria, 7; whooping-cough, 44; fever, 1; and diarrhœa, 6.

BRAZIL—*Bahia.*—The United States consul reports to the Department of State as follows:

March 11, 1889.—I have the honor to report that during the month of February the health of the city was good, and up to present date of this month has remained so. A great deal of anxiety, however, is now manifested by the health authorities of the city and the people in general, owing to the reported increase of yellow fever at Rio de Janeiro. Vessels from Rio de Janeiro or Santos are subjected to a strict examination by the health authorities of the city. One case of yellow fever was reported on an English steamer entering this port last week. On the patient being removed to the hospital it was found, fortunately, to be a case of bilious instead of yellow fever.

March 19, 1889.—I had the honor to report in despatch No. 10, on the 11th instant, the health of the city good. The same holds true up to present date, but the gravest fears are entertained that the city will soon be visited by the black plague, as it is called, now reported raging at Rio de Janeiro and Santos, and other places south. The authorities here have placed a quarantine upon all vessels from the southern part of this country. Under this quarantine four steamers are now at this port, having arrived since the 16th, and all having cases of yellow fever on board. From the "Argantina," German, of the Hamburg Line, eight deaths are reported since leaving Rio de Janeiro, the captain having died yesterday on board his ship. The others reported having died are chief officers, doctor, chief engineer, quartermaster, steward, and two sailors. The "Neva," British, of the Royal Mail Line, reports sickness on board, and two deaths since leaving Rio. A Dutch steamer and one of the Brazilian line of coasters also report sickness, but no deaths as yet. All communication with such ships is entirely cut off, except by the health officer of the port; agents of the different lines have received orders not to sell tickets to the Argentine Republic, at least to Montevideo or Buenos Ayres, from any part of Brazil. I am informed the above-mentioned cities have placed a quarantine of 21 days against Brazilian ports. No measures are taken by the authorities to clean the streets, which are in a very filthy condition. If the epidemic comes, there is no doubt it will fall upon the city with great severity.

Rio de Janeiro.—During the week ended March 17, 1889, there were 647 deaths registered from all causes, in an estimated population of 300,000; including yellow fever, 81; small-pox, 2; typhus fever, 78; enteric fever, 19; and *accesso pernicioso*, 112.

During the week ended March 24, there were 377 deaths from all causes, including yellow fever, 68; small-pox, 2; typhus fever, 12; enteric fever, 11; and *accesso pernicioso*, 14.

ARGENTINE REPUBLIC—*Buenos Ayres.*—One thousand one hundred and eighty-six deaths were registered during the month of January, 1889, in an estimated population of 480,000. The deaths included small-pox, 9; enteric fever, 41; scarlet fever, 1; and diphtheria, 53. The prevailing diseases are enteric fever and diphtheria.

DUTCH GUIANA—*Paramaribo.*—Ninety-seven deaths were registered during the month of January, 1889, in an estimated population of 27,553, including 2 from enteric fever.

ITALY—*Palermo.*—One death from small-pox was registered during the month of March, 1889. The sanitary condition of the port is said to be good.

MALTA AND GOZO—Two hundred and forty-two deaths were registered during the first two weeks in March, 1889, including small-pox, 1; measles, 22; whooping-cough, 7; diphtheria, 1; dysentery, 1; and remittent fever, 2.

CUBA—*Havana.*—For the week ended April 18, two deaths from yellow fever are reported; and four for the week ended April 26, 1889.

Cardenas, April 19, 1889.—Good health and good weather in town and harbor.

BAHAMAS—*Nassau, N. P., April* 20, 1889.—No prevailing diseases of importance. City very healthy.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Apr. 13	5,642,015	1,845	.....	.....	.....	1	10	14	42	84	.....
Paris	Apr. 13	2,260,945	1,010	.....	.....	4	.....	12	4	43	31	12
Glasgow	Apr. 13	528,144	294	.....	.....	.....	.....	.....	1	3	23	30
Warsaw	Apr. 6	445,770	235	.....	.....	5	.....	.....	4	8	.....	.....
Amsterdam	Apr. 13	399,051	195	.....	.....	.....	.....	1	.....	2	.....	.....
Copenhagen	Apr. 11	307,000	145	.....	.....	.....	.....	.....	.....	6	.....	.....
Edinburgh	Apr. 6	266,900	91	.....	.....	.....	1	.....	1	.....	.....	.....
Palermo	Apr. 13	250,000	97	.....	.....	.....	.....	.....	3	4	.....	.....
Trieste	Apr. 6	154,500	89	.....	.....	.....	.....	1	.....	.....	.....	.....
Stuttgart	Apr. 13	125,510	74	.....	.....	.....	.....	.....	2	4	.....	.....
Havre	Apr. 6	112,074	92	.....	.....	3	.....	1	.....	.....	.....	.....
Havre	Apr. 13	112,074	56	.....	.....	1	.....	1	.....	.....	.....	.....
Barmen	Apr. 6	109,000	44	.....	.....	.....	.....	.....	.....	3	1	.....
Barmen	Apr. 13	109,000	48	.....	.....	.....	.....	.....	.....	.....	1	.....
Leith	Apr. 6	76,400	27	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Apr. 6	65,802	26	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Apr. 6	65,028	55	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Apr. 13	65,028	70	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Apr. 5	47,448	98	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Apr. 12	47,448	110	.....	.....	.....	.....	1	.....	.....	.....	.....
Curaçao	Apr. 13	25,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Apr. 7	23,881	9	.....	.....	.....	.....	.....	.....	1	.....	.....
Gibraltar	Apr. 14	23,881	21	.....	.....	.....	.....	.....	.....	3	.....	.....
Kingston, Can	Apr. 27	17,300	31	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	Apr. 13	15,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

GEORGIA—*South Atlantic Quarantine Station.*—Passed Assistant Surgeon J. H. White, in charge of this station, reports that a mild case of yellow fever has developed on the Swedish bark "John Fougt,"

which arrived there April 10 (see Abstract No. 16). The vessel is discharging ballast and will be fumigated, after which she will be allowed to put to sea if the captain so desires.

The Norwegian bark "Imperator" arrived at this station April 14, in ballast (stone) from Rio de Janeiro for Savannah, with a crew of twelve men, all well on arrival. There was one death from Chagres fever on the voyage. The vessel is discharging ballast, and will be fumigated, and released when this is completed.

FLORIDA—*Manatee.*—A committee appointed by the board of health of Manatee County, Florida, to examine into the sanitary condition of the town of Manatee, have made a house-to-house inspection, and report the town in fair sanitary condition.

Sanitary Inspection of Live Oak and Lake City.

SIR: In obedience to your telegraphic order of the 12th of April, I have visited the town of Live Oak, Fla., county seat of Suwanee County, and Lake City, Fla., the county seat of Columbia County, both situated on the main lines of the Florida Railway Navigation Company, and Florida Western Railways. After a general sanitary inspection and conversations with the local practitioners, I feel assured that there are no infectious diseases prevalent at these two places. There seems to exist an unfortunate apathy, on the part of local health officers, in making any systematic efforts to maintain an ordinary degree of cleanliness of their streets, drains, and public places. In the central part of the town of Live Oak the practice is tolerated of allowing the sewage from the county jail to flow into a small marshy pond a few yards distant, which, during the summer drought, becomes dry, leaving the fecal matter exposed to slow evaporation, necessarily producing a very unwholesome atmospheric condition. The topography of the town is such that the surface drainage flows into several small lagoons, which are situated in the coporate limits, and doubtless supply ample morbific material for the development of the various types of malarial fever which prevail during the summer and autumn. Little attention is paid to the systematic removal of garbage and contents of open closets, and as a result the water supplied by wells of no great depth furnish types of typho-malarial fever, which usually prevails. The general sanitary condition of this town is bad, and the prevalence of yellow fever last year during the autumn should awaken the residents to the necessity of some early improvement of their surroundings.

The inspection of Lake City reveals a condition that is far from pleasing, and which is susceptible of great improvement. There is no methodical disinfection of fecal accumulations or removal of garbage, which is usually thrown from premises into the smaller side streets to await the indefinite arrival of the city garbage cart. The location here of the State Seminary and Agricultural School, whose buildings and premises are handsome and very inviting, should be a high incentive for the municipal council to maintain a perfect sanitary state of their city and emulate the example of this institution. I was informed that some early action is contemplated to improve their present unsanitary

condition, but it is difficult to predict when these measures will be inaugurated, as small municipal bodies move tardily and their resources usually are very limited. It is a subject of surprise to me that so little foresight has been exercised in nearly all the smaller towns of Florida in the selection of sites for cemeteries. In view of the porous nature of the soil and the general use of well-water, it would appear a matter of ordinary prudence to locate the burial plot a mile at least from the corporate limits of a town, but the usual site is in the town proper or just beyond its boundary. In the rapid growth of most of these towns the founders and earlier settlers seem to have placed implicit faith in the balmy atmosphere and climate of this peninsula as ample protection against their neglect and indifference to the most ordinary sanitary precautions, but the experiences of the recent invasion of disease last summer, I trust, will prove a wholesome lesson, illustrating the need and value of improved domestic and municipal sanitation. Nature has indeed been lavish in her gifts to this sub-tropical and attractive land, but there is ample scope for man to render it still more so by the wise exercise of his genius and industry.

Very respectfully,

J. L. POSEY,

United States Sanitary Inspector, Marine Hospital-Service.

To Surgeon-General HAMILTON,

United States Marine-Hospital Service.

Quarantine Proclamation by the Governor of Louisiana.

Whereas on the 11th day of April, A. D. 1889, the board of health of the State of Louisiana have adopted resolutions requesting the executive of this State to issue his annual proclamation of quarantine against the hereinafter enumerated and mentioned ports, to take effect from and after the 1st day of May, A. D. 1889—

All vessels arriving at the several quarantine stations in this State, together with their crews, passengers, and cargoes, shall be subjected to inspection by the quarantine officers at said stations;

All vessels, together with their cargoes, crews, passengers, and baggage arriving at the Mississippi quarantine station from intertropical American and West Indian ports, shall be subjected to thorough maritime sanitation, according to the following schedule:

First Class—Vessels arriving from non-infected ports;

Second Class—Vessels arriving from suspected ports;

Third Class—Vessels arriving from ports known to be infected;

Fourth Class—Vessels which, without regard to port of departure, are infected; that is to say, vessels which have yellow fever, cholera, or other contagious or infectious diseases on board at time of arrrival, or have had same on voyage;

Vessels of the first class to be subjected to necessary maritime sanitation at the Mississippi River quarantine station, without detention of either vessel or persons longer than may be necessary to place such vessel in perfect sanitary condition;

Vessels engaged in the tropical-fruit trade, and coming from known non-infected localities, and whose sanitary condition and health record are satisfactory, may be allowed to pass the quarantine station after inspection, subject, however, to such sanitary treatment as the board of health may prescribe;

Vessels of the second and third classes to undergo the same conditions as those of the first class, together with detention for observation for a period of five full days from hour of arrival in quarantine;

Vessels of the fourth class to be remanded to the lower quarantine station, there to undergo sanitation and detention of vessels and persons such length of time as the board of health may determine;

All vessels arriving from ports known or suspected to be infected with cholera or small-pox, or which may hereafter become infected, shall be subjected to maritime sanitation and such detention as the board of health may determine;

Vessels arriving from the above-named ports and places, and belonging to the second, third, or fourth class, as set forth in the above schedule, shall not be allowed to pass the Rigolets or the Atchafalaya quarantine stations, or other State quarantine stations which may hereafter be established, without having undergone a period of detention of forty days and thorough cleaning and disinfection:

Now, therefore, in accordance with the laws of this State and upon the recommendation of the board of health of the State of Louisiana, I have thought proper to issue this my annual proclamation of quarantine, directing that quarantine shall take effect from and after Wednesday, the first day of May, A. D. 1889, against the above-mentioned ports and as contained in the foregoing schedule.

Quarantine officers at the several stations in this State are specially charged and required to strictly enforce the execution of this proclamation, and the board of health in the city of New Orleans is requested to prosecute vigorously all violations of the same, as well as the quarantine laws and regulations of this State.

In testimony whereof, I have hereunto affixed my signature, authenticated with the seal of the State of Louisiana, at the city of Baton Rouge, this 16th day of April, in the year of our Lord one thousand eight hundred and eighty-nine.

FRANCIS T. NICHOLLS,
Governor of Louisiana.

By the Governor:
GEO. SPENCER, *Ass't Secretary of State.*

Special suggestions to owners, agents, masters of vessels, and passengers.

The Louisiana State board of health recommends the following suggestions to agents, owners, masters of vessels, and passengers, for the purpose of facilitating the work of quarantine officers and reducing the period of detention to a minimum:

1. That vessels should be stripped during the quarantine seasons of all woolen hangings, carpets, curtains, and such like materials, and upholstered furniture as far as practicable. Hair or moss mattresses to be replaced by wire or wicker beds.

2. That as far as possible vessels trading with tropical ports should be manned with acclimated crews.

3. Masters of vessels, ship and consular agents are earnestly requested to instruct passengers from quarantinable ports to dispense, as far as possible with baggage which may be injured by wetting, in case of pestilential outbreak on board, while undergoing disinfection. Such

passengers are especially warned against bringing silks, laces, velvets, and other fabrics of delicate texture, as they will be compelled to assume all risks of injury.

4. While in ports infected with yellow fever, vessels should be anchored out in the harbor, when this is possible, and the crew prohibited from going ashore, especially at night.

5. When practicable, cargoes should be loaded in such a manner as to allow access to the pumps, and also to enable the quarantine officials to pump out and wash the bilge.

6. Special attention should be given to cleanliness of vessels and persons, and provision should be made for all possible ventilation of the entire vessel. The best disinfectants and instructions for using same can be obtained by application to the Board of Health or any of its officers.

7. Masters should, before arrival, see that the bilge is thoroughly pumped out and cleansed, and that the entire vessel be put in such good sanitary condition as to permit of the least possible detention. Fruit-vessels, particularly, should be kept thoroughly cleansed for the purpose of avoiding delay at the quarantine station.

8. Vessels observing the above recommendations will receive special consideration at the quarantine station, detention and cost of cleaning, disinfecting, &c., being materially lessened thereby.

MICHIGAN.—Reports to the State Board of Health, Lansing, from forty-two observers, indicate that for the week ended April 20, 1889, tonsilitis, whooping-cough, and neuralgia increased in area of prevalence. Diphtheria was reported during the week ended April 20, and since, at five places; scarlet fever at twelve places; enteric fever at four places; measles at six places; small-pox, in the contagious diseases, hospital at Detroit.

CONNECTICUT—*New Haven.*—Month of March, 1889; estimated population, 82,000; total deaths, 112, including enteric fever, 3; whooping-cough, 1; diphtheria and membranous croup, 6.

VIRGINIA—*Petersburg.*—Month of April, 1889; estimated population, 25,000; total deaths, 58. No contagious diseases.

MASSACHUSETTS—*Newton.*—Month of March, 1889; estimated population, 21,553; total deaths, 23, including diphtheria, 2; enteric fever, 1.

NEW JERSEY—*Hudson County.*—Month of March, 1889; estimated population, 282,254; total deaths, 634, including measles, 2; scarlet fever, 32; diphtheria, 33; whooping-cough, 8; enteric fever, 11; diarrhœal diseases, 3.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	W hooping-cough.
New York, N. Y	Apr. 27	1,563,452	830	.....	.....	.....	.....	.....	.....	3	51	54	12	19
Philadelphia, Pa	Apr. 20	1,040,245	423	.....	.....	.....	.....	1	.....	8	2	10	2	2
Philadelphia, Pa	Apr. 27	1,040,245	395	.....	.....	.....	.....	.....	.....	15	5	6	2	4
Chicago, Ill	Apr. 27	830,000	256	.....	.....	.....	.....	.....	.....	2	8	18	4	1
Brooklyn, N. Y	Apr. 27	821,525	324	.....	.....	.....	.....	.....	.....	.....	9	28	15	4
Baltimore, Md	Apr. 27	500,343	132	.....	.....	.....	.....	.....	.....	.....	1	2	.....	2
San Francisco, Cal	Apr. 19	330,000	121	.....	.....	.....	.....	.....	.....	4	.....	2	.....	.....
Cincinnati, Ohio	Apr. 27	325,000	128	.....	.....	.....	.....	.....	.....	2	.....	7	1	1
New Orleans, La	Apr. 20	254,000	118	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....
Cleveland, Ohio	Apr. 6	235,000	80	.....	.....	.....	.....	.....	.....	2	1	2	.....	.....
Cleveland, Ohio	Apr. 13	235,000	88	.....	.....	.....	.....	.....	.....	2	1	1	.....	.....
Pittsburgh, Pa	Apr. 27	230,000	96	.....	.....	.....	.....	.....	.....	2	1	1	.....	.....
Detroit, Mich	Apr. 20	230,000	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Washington, D. C	Apr. 27	225,000	85	.....	.....	.....	.....	.....	.....	1	4	1	.....	.....
Milwaukee, Wis	Apr. 27	210,000	49	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Minneapolis, Minn	Apr. 20	200,000	54	.....	.....	.....	.....	.....	.....	1	1	6	.....	.....
Newark, N. J	Apr. 23	181,351	82	.....	.....	.....	.....	.....	.....	.....	2	2	.....	1
Kansas City, Mo	Apr. 27	180,000	36	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Rochester, N. Y	Apr. 27	120,000	50	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Richmond, Va	Apr. 20	100,000	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond, Va	Apr. 27	100,000	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Denver, Colo	Apr. 26	100,000	30	.....	.....	2	.....	.....	.....	.....	.....	1	.....	.....
Toledo, Ohio	Apr. 26	83,500	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn	Apr. 27	65,153	19	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....
Fall River, Mass	Apr. 27	65,000	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Charleston, S. C	Apr. 20	60,145	28	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Charleston, S. C	Apr. 27	60,145	25	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
Lynn, Mass	Apr. 27	50,000	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me	Apr. 27	42,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H	Apr. 20	42,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
East Saginaw, Mich	Apr. 27	40,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex	Apr. 12	40,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex	Apr. 19	40,000	8	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Council Bluffs, Iowa	Apr. 13	35,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	Apr. 20	35,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	Apr. 20	33,715	7	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
Davenport, Iowa	Apr. 27	33,715	3	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Altoona, Pa	Apr. 20	30,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y	Apr. 27	26,000	12	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Newport, R. I	Apr. 25	22,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass	Apr. 27	21,553	7	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Keokuk, Iowa	Apr. 20	16,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	Apr. 27	16,000	6	.....	.....	.....	.....	.....	.....	.....	.....	2	2	.....
Pensacola, Fla	Apr. 20	15,000	5	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 19. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., May 10, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended May* 10, 1889, *and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended April 20, corresponded to an annual rate of 19.4 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz., 12.0, and the highest in Preston, viz., 37.6 a thousand. Diphtheria caused 6 deaths in Salford, 4 in Bolton, and 3 in Manchester.

London.—One thousand four hundred and twenty-six deaths were registered during the week, including measles, 70; scarlet fever, 10; diphtheria, 22; whooping-cough, 51; enteric fever, 16; diarrhœa and dysentery, 10. The deaths from all causes corresponded to an annual rate of 17.1 a thousand. Diseases of the respiratory organs caused 299 deaths. In greater London 1,800 deaths were registered, corresponding to an annual rate of 16.6 a thousand of the population. In the "outer ring" the deaths included measles, 10; scarlet fever, 6; and whooping-cough, 11.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended April 20, in the 16 principal town districts of Ireland, was 23.0 a thousand of the population. The lowest rate was recorded in Newry, viz., 10.5, and the highest in Wexford, viz., 51.3 a thousand. In Dublin 159 deaths were registered, including whooping-cough, 3; enteric fever, 2; measles, 2; and diarrhœa, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended April 20, corresponded to an annual rate of 23.7 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Greenock, viz., 14.0, and the highest in Paisley, viz., 29.9 a thousand. The aggregate number of deaths registered from all

causes was 607, including measles, 34; scarlet fever, 4; diphtheria, 6; whooping-cough, 50; fever, 5; and diarrhœa, 8.

The total number of deaths registered in Scotland during the year 1888 was 71,161, being in the proportion of 17.6 a thousand of the estimated population. This is the lowest death rate for any year since 1855. The deaths registered in the eight principal towns during the year numbered 26,134, including whooping-cough, 668; measles, 604; diarrhœa and dysentery, 561; diphtheria, 343; scarlet fever, 276. Fevers caused 256 deaths, including typhus, 54; and enteric fever, 186. No deaths were registered from small-pox during the year.

Malta and Gozo.—The following notices are published in the Malta Government Gazette:

April 5, 1889. His excellency, the governor, having heard the opinion of the board of health, has been pleased to direct that vessels arriving here from ports infected with yellow fever are to be disinfected at this port, unless they have been so disinfected at intermediate ports.

April 9, 1889. His excellency, the governor, having heard the opinion of the board of health, has been pleased to give the following directions:

"Sfratto" [non-intercourse] is to be enforced with respect to vessels coming from Rio Janeiro, or other ports, when cases of yellow fever have taken place on board. Vessels will be allowed to coal, in strict quarantine, on condition that they leave afterwards with the least possible delay. Vessels coming from ports known to be infected with yellow fever are to be subjected to fourteen days' quarantine and to be disinfected, unless they have been disinfected at an intermediate port.

By command,

G. STRICKLAND,
Acting Chief Secretary to Government.

During the period from 16th to 31st of March, 1889, 237 deaths were registered, including small-pox, 3; measles, 19; whooping-cough, 3; diphtheria, 2; continued fever, 1; and dysentery, 3.

FRANCE—*Bordeaux.*—For the month ended February 28, 1889, there were 501 deaths registered from all causes in an estimated population of 240,582, including scarlet fever, 1; enteric fever, 6; and diphtheria and croup, 10.

For the month ended March 31st, there were 524 deaths registered from all causes, including small-pox, 2; enteric fever, 8; scarlet fever, 3; and diphtheria and croup, 23.

BRAZIL—*Ceara.*—For the month of March, 1889, 417 deaths were registered. No contagious diseases reported.

Maceio.—Six hundred and eighty-seven deaths were registered during the month of February, 1889, in a population of 17,000, including 602 from small-pox.

CUBA—*Havana.*—The United States sanitary inspector reports as follows, under date of May 4th, 1889:

"There were 505 deaths in this city during the month of April. Twelve of these deaths were caused by yellow fever, 30 by so-called pernicious fever, 4 by diphtheria and croup, 1 by scarlet fever, and 1 by hydrophobia.

"Three deaths from yellow fever were reported in Havana during the week ended May 2, 1889."

Cardenas.—April 27, 1889. Good weather and good health in town and harbor.

Barbadoes, W. I.—April 20, 1889. Health of island good.

Nassau, N. P.—April 27, 1889. City is healthy.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Apr. 20	2,260,945	972	.....	.....	7	.....	7	2	31	29	20
Glasgow	Apr. 20	545,678	299	.....	.....	.....	.....	3	3	3	.....	.....
Warsaw	Apr. 13	445,770	236	.....	.....	3	.....	.....	1	1	.....	.....
Calcutta	Mar. 25	433,219	181	28	.....	1	.....	.....	.....	.....	.....	.....
Rome	Mar. 16	401,044	207	.....	.....	.....	.....	.....	.....	5	.....	.....
Amsterdam	Apr. 20	399,051	153	.....	.....	.....	1	.....	.....	2	.....	.....
Copenhagen	Apr. 6	307,000	130	.....	.....	.....	.....	.....	.....	3	.....	.....
Copenhagen	Apr. 13	307,000	117	.....	.....	.....	.....	.....	.....	4	.....	.....
Edinburgh	Apr. 13	266,900	76	.....	.....	.....	.....	.....	.....	1	.....	.....
Palermo	Apr. 22	250,000	107	.....	.....	.....	.....	.....	2	8	.....	.....
Belfast	Apr. 13	229,622	110	.....	.....	.....	.....	2	.....	2	.....	.....
Genoa	Apr. 20	179,866	117	.....	.....	.....	1	.....	.....	2	.....	.....
Trieste	Apr. 13	154,500	83	.....	.....	1	.....	1	.....	1	.....	.....
Stuttgart	Apr. 20	125,510	44	.....	.....	.....	.....	.....	2	3	.....	.....
Pernambuco	Apr. 2	120,000	109	.....	3	.....	1	2	1	.....	.....	.....
Pernambuco	Apr. 9	120,000	112	.....	3	.....	2	3	1	.....	.....	.....
Leith	Apr. 13	76,400	32	.....	.....	.....	.....	.....	1	.....	.....	.....
Cadiz	Apr. 20	65,028	45	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	May 3	17,300	22	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leghorn	Apr. 14	102,893	37	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leghorn	Apr. 21	102,893	42	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Apr. 5	13,500	33	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Apr. 12	13,500	38	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Apr. 19	13,500	38	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

SOUTH CAROLINA—*Port Royal.*—Dr. T. Grange Simons, chairman quarantine committee, South Carolina State board of health, informs this Bureau, under date of May 8th, that the Russian bark "Rurik," from Rio de Janeiro, arrived at Port Royal, S. C., quarantine station, on Friday, May 3, having left Rio de Janeiro March 6. She had three of her crew sent to hospital in Rio with yellow fever, from which they died. One man was taken sick with "fever" when only one day out.

It is claimed by the captain that this was not yellow fever. No one else was reported sick during the voyage. The pilot, in violation of State laws and the governor's proclamation, brought her in. She has been sent to South Atlantic quarantine station Sapelo for inspection and observation, and will be cleansed and fumigated. The pilot has been quarantined, and will be prosecuted for violation of quarantine law.

Delaware Breakwater Quarantine Station.—The legislature of Delaware has passed an "Act to cede certain lands to the United States of America" for the use of the Marine-Hospital Service as a quarantine reservation at Delaware breakwater, and commissioners to set apart the quarantine reservation have been designated.

CALIFORNIA—*San Francisco.*—One case of small-pox is reported for the week ended April 26, 1889. This case came direct from Dedham, Mass.

MISSISSIPPI—*Ship Island.*—By order of the executive committee of the Mississippi State board of health, the State quarantine station at Ship Island was opened May 1, 1889, by Dr. A. Parker Champlin, quarantine physician in charge.

MICHIGAN.—Month of April, 1889. Reports to the State board of health, Lansing, by one hundred and eighty-five observers, in different parts of the State, indicate that as compared with the preceding month, intermittent fever, rheumatism, and remittent fever increased, and that influenza, pleuritis, and pneumonia decreased in area of prevalence. Diphtheria was reported at twenty-three places; scarlet fever, at forty-three places; enteric fever, at five places; measles, at fourteen places; and small-pox at one place.

Reports from forty-eight observers during the week ended April 27, 1889, indicate that bronchitis, diarrhœa, typho-malarial fever, and remittent fever increased, and that pneumonia and whooping-cough decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported during the week ended April 27, and since, at six places; scarlet fever, at twenty places; enteric fever, at two places; measles, at six places; small-pox, one case in contagious disease hospital near Detroit.

MASSACHUSETTS—*Newton.*—Month of March, 1889. Estimated population, 21,553. Total deaths 23, including diphtheria, 1; enteric fever, 1.

IOWA—*Keokuk.*—Month of April, 1889. Estimated population, 16,000. Total deaths 18, including diphtheritic croup, 2; enteric fever, 1; measles, 2.

PENNSYLVANIA—*Williamsport.*—Month of April. Estimated population, 33,444. Total deaths, 5. The health officer says: "The citizens

of Williamsport enjoy the best of health. We are free from infectious diseases."

VIRGINIA—*Lynchburg.*—Month of April, 1889. Estimated population, 16,500. Total deaths 43, including diarrhœa, 1; dysentery, 2; and whooping-cough, 1.

RHODE ISLAND.—Month of March, 1889. The deaths registered in thirty cities and towns, and reported to the State registrar, show a total of 533 from all causes, including croup, 13; diarrhœa, 2; diphtheria, 18; enteric fever, 4; scarlatina, 2; and whooping-cough, 13. The towns making returns represent an estimated population of 315,800.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	May 4	1,564,324	731	.....	.....	.....	.....	.....	.....	2	34	56	20	.....
Philadelphia, Pa.	May 4	1,040,245	402	.....	.....	.....	...	.....	.....	10	9	7	5	5
Brooklyn, N. Y.	May 4	821,555	333	.....	.....	.....	.....	.....	.....	1	8	27	3	3
Baltimore, Md	May 4	500,343	152	.....	.....	.....	.....	.....	.....	1	1	2	.....	.....
Cincinnati, Ohio	May 4	325,000	85	.....	.....	.....	.....	.....	.....	2	1	3	1	.....
New Orleans, La.	Apr. 27	254,000	104	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....
San Francisco, Cal.	Apr. 26	330,000	117	.....	.....	.....	.....	.....	.....	4	.....	2	.....	.....
Pittsburgh, Pa.	May 4	230,000	60	.....	.....	.....	.....	.....	.....	.....	2	.....	1	.....
Detroit, Mich.	Apr. 27	230,000	57	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....
Detroit, Mich.	May 4	230,000	46	.....	.....	.....	.....	.....	.....	.....	1	4	.....	.....
Louisville, Ky.	Apr. 27	227,000	66	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Louisville, Ky.	May 4	227,000	72	.....	.....	.....	.....	1	.....	4	.....	.....	3	3
Milwaukee, Wis.	May 4	210,000	50	.....	.....	.....	.....	.....	.....	2	3	3	.....	.....
Minneapolis, Minn.	Apr. 27	200,000	35	.....	.....	.....	.....	.....	.....	2	1	2	.....	1
Newark, N. J.	Apr. 30	181,351	79	.....	.....	.....	.....	.....	.....	3	.....	6	.....	1
Kansas City, Mo.	May 4	180,000	42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Providence, R. I.	Apr. 27	127,000	50	.....	.....	.....	.....	.....	.....	6	2	1	.....	.....
Providence, R. I.	May 4	127,000	40	.....	.....	.....	.....	.....	.....	.....	3	1	.....	.....
Rochester, N. Y.	May 4	120,000	35	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Richmond, Va.	May 6	100,000	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Denver, Colo.	May 3	100,000	27	.....	.....	.....	.....	.....	.....	1	.....	1	1	.....
Toledo, Ohio	May 3	83,500	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn.	May 4	65,153	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	May 4	65,000	27	.....	.....	.....	.....	.....	.....	2	2	1	.....	.....
Lynn, Mass	May 4	50,000	16	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Charleston, S. C.	May 4	60,145	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Manchester, N. H.	Apr. 27	42,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	May 4	42,000	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Apr. 26	40,000	14	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Council Bluffs, Iowa	Apr. 27	35,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	Apr. 27	30,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	May 6	30,000	8	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Auburn, N. Y.	Apr. 4	26,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Apr. 27	25,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Haverhill, Mass.	May 4	25,000	6	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Newport, R. I.	May 2	22,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	May 4	21,553	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	May 4	16,000	8	.....	.....	.....	.....	.....	.....	8	.....	.....	1	.....
Pensacola, Fla.	Apr. 27	15,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	May 4	15,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 20. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., May 17, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended May* 17, 1889, *and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended April 27, corresponded to an annual rate of 19.5 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz., 12.4, and the highest in Preston, viz., 38.6 a thousand. Diphtheria caused 3 deaths in Birmingham, 3 in Manchester, 2 in Plymouth, and 2 in Preston. During the quarter ended March 31, 1889, there were 139,749 deaths registered in England and Wales, corresponding to an annual rate of 19.5 a thousand of the population. This rate was 2.3 below the mean rate in the corresponding periods of the ten years 1879–88, and lower than that recorded in any winter quarter since the commencement of civil registration, excepting only the quarter of 1884, when the rate was the same. The deaths included measles, 5,148; whooping-cough, 3,138; scarlet fever, 1,544; diarrhœa, 1,394; diphtheria, 1,353; fevers, 993; and small-pox, 8.

London.—One thousand four hundred and sixty-three deaths were registered during the week, including measles, 65; scarlet fever, 9; diphtheria, 29; whooping-cough, 56; enteric fever, 3; diarrhœa and dysentery, 18. The deaths from all causes corresponded to an annual rate of 17.6 a thousand. Diseases of the respiratory organs caused 305 deaths. In greater London 1,856 deaths were registered, corresponding to an annual rate of 17.2 a thousand of the population. In the "outer ring" the deaths included measles, 13.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended April 27, in the 16 principal town

districts of Ireland, was 27.3 a thousand of the population. The lowest rate was recorded in Newry, viz., 17.6, and the highest in Kilkenny, viz., 46.5 a thousand. In Dublin 191 deaths were registered, including whooping-cough, 1; enteric fever, 5; measles, 2; diarrhœa, 3; typhus, 1; erysipelas, 1; and scarlet fever, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended April 27, corresponded to an annual rate of 21.7 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Edinburgh, viz., 12.9, and the highest in Glasgow, viz., 28.3 a thousand. The aggregate number of deaths registered from all causes was 554, including measles, 43; scarlet fever, 5; diphtheria, 4; whooping-cough, 41; fever, 4; and diarrhœa, 11.

Gibraltar.—Ten deaths were registered during the week ended April 21, 1889, including 2 from diphtheria. Several cases of small-pox were registered at Algeciras, a Spanish town twelve miles distant by land from Gibraltar.

BRAZIL—*Bahiá.*—The United States consul writes to the Department of State as follows, under date of April 12, 1889:

I had the honor to forward you on the 23d ultimo, two dispatches, dated March 20 and 22, respectively, and numbered 13 and 14, referring to the yellow fever in the hospital in this city and the fears entertained that this place would be afflicted as Rio de Janeiro and other places south have been during the past three months. Happily, however, providentially I might say, since the 27th ultimo, very heavy rains have fallen, cleaning and purifying the streets and carrying from them into the sea the accumulated filth of four or five months. It is believed therefore that the threatened epidemic is averted for the present.

* * * * * * *

The inaction of the municipal authorities in the matter of sanitary regulations for the city is very much to be regretted. In a future dispatch will refer to this subject at greater length. The quarantine on vessels coming from the south is now in force only for such vessels as have sickness on board when arriving at this port. The fever at Rio de Janeiro is abating, according to latest advices, while at Santos, Campinas, and other places south, it is said to be on the increase. Small-pox is reported to quite an alarming extent at Maranhao some distance north of this place.

Rio de Janeiro.—For the week ended March 31, 1889, there were 423 deaths registered, in an estimated population of 300,000, including yellow fever, 26; small-pox, 1; typhus fever, 10; enteric fever, 7, and diphtheria, 1.

For the week ended April 7, 1889, there were 359 deaths registered, including yellow fever, 25; small-pox, 1; typhus fever, 6; enteric fever, 7, and diphtheria, 1.

For the week ended April 14, 1889, there were 393 deaths registered, including yellow fever, 17; small-pox, 4; typhus fever, 13, and enteric fever, 2. Fevers and pulmonary affections are the prevailing diseases.

Rio Grande do Sol.—The United States consul, in his abstract of bills of health for the month of March, 1889, states that the bill of health issued to the master of the barkentine "Brunette," bound for Boston, was "clean," with a clause inserted explaining that a few cases of yellow fever had been imported from Rio de Janeiro by immigrants, but the disease had since disappeared from the port and city of Rio Grande do Sol.

UNITED STATES OF COLOMBIA—*Colon.*—The United States consul states, under date of April 30, 1889, that the yellow fever which appeared there on April 3 was sporadic, and has entirely disappeared since the rainy season set in, and he thinks the condition of the port good again.

Carthagena.—The United States consul reports for the week ended March 23, 1889, two cases of sporadic yellow fever in hospital amongst newly-arrived troops.

For the week ended April 6, one case of sporadic yellow fever and one of beri-beri were reported, also, amongst the newly-arrived troops.

BRITISH WEST INDIES—*Trinidad.*—Estimated population, 189,566. Twenty-nine deaths were reported during the week ended April 29. No contagious diseases reported. The prevailing diseases were consumption, fever, dropsy, dysentery, and marasmus.

CUBA—*Cardenas.*—May 4, 1889. Dry and warm weather. Good health in town and harbor.

Havana.—Three deaths from yellow fever were registered during the week ended May 11, 1889.

MEXICO—*Guaymas.*—April 30, 1889. No particular or epidemic sickness in this consular district. Sanitary condition of city good. Total number of deaths during the month, 9. Population, 5,500.

NETHERLANDS.—The deaths registered in the principal cities of the Netherlands, having an aggregate population of 1,129,678, during the year 1888 corresponded to an annual rate of 23.4 a thousand. The lowest rate was recorded in Leeuwarden, viz., 20.84, and the highest in Hertogenbosch, viz., 30.24. The deaths included typhus and enteric fevers, 119; scarlet fever, 39; measles, 385; croup, 237; whooping-cough, 453; diarrhœa and dysentery, 359; and cholera nostras, 33.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Apr. 27	2,260,945	1,055	.....	.....	5	.....	10	2	37	15	14
Glasgow	Apr. 27	545,678	287	.....	.....	.....	.....	2	4	2	.....	.....
Warsaw	Apr. 20	445,770	218	.....	.....	.....	.....	.....	.....	2	.....	.....
Calcutta	Mar. 30	433,219	173	20	.....	4	.....	.....	.....	.....	1	.....
Amsterdam	Apr. 27	399,051	171	.....	.....	.....	.....	1	.....	3	.....	.....
Copenhagen	Apr. 20	307,000	137	.....	.....	.....	.....	.....	.....	4	.....	.....
Munich	Apr. 6	281,000	177	.....	.....	.....	.....	.....	.....	5	.....	.....
Munich	Apr. 13	281,000	173	.....	.....	.....	.....	.....	6	7	.....	.....
Munich	Apr. 20	281,000	176	.....	.....	.....	.....	1	4	6	.....	.....
Edinburgh	Apr. 20	266,900	103	.....	.....	.....	.....	.....	1	2	.....	.....
Palermo	Apr. 27	250,000	94	.....	.....	.....	.....	.....	4	3	.....	.....
Belfast	Apr. 20	229,622	115	.....	.....	.....	.....	2	2	.....	.....	.....
Belfast	Apr. 27	229,622	122	.....	.....	.....	1	1	.....	.....	.....	.....
Bristol	Apr. 13	229,361	75	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bristol	Apr. 20	229,361	82	.....	.....	.....	.....	1	.....	.....	.....	.....
Bristol	Apr. 27	229,361	79	.....	.....	.....	.....	.....	.....	.....	.....	.....
Genoa	Apr. 27	179,885	96	.....	.....	1	.....	.....	.....	.....	.....	.....
Toronto	May 4	175,000	38	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stuttgart	Apr. 27	125,510	66	.....	.....	.....	.....	.....	2	5	.....	.....
Havre	Apr. 20	112,074	64	.....	.....	2	.....	1	.....	.....	.....	.....
Barmen	Apr. 20	109,000	39	.....	.....	.....	.....	.....	.....	.....	2	.....
Leghorn	Apr. 28	102,893	47	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	Apr. 20	76,400	24	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Apr. 13	65,802	35	.....	.....	.....	.....	.....	.....	2	.....	.....
Mayence	Apr. 20	65,802	34	.....	.....	.....	.....	.....	1	1	.....	.....
Cadiz	Apr. 27	65,028	50	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Apr. 19	47,112	119	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Apr. 26	47,112	101	.....	.....	.....	1	.....	.....	.....	.....	.....
Vera Cruz	May 2	27,800	19	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antigua	Apr. 28	15,847	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Apr. 27	7,428	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Apr. 8	1,004	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

FLORIDA—*Key West.*—Surgeon R. D. Murray, in charge of the Marine-Hospital Service at Key West, Fla., reports under date of May 10, 1889, the recovery of the case of small-pox which was sent to Tortugas quarantine from the steamship "Comal."

MICHIGAN.—Week ended May 4, 1889. Reports to the State board of health, Lansing, from fifty-nine observers in different parts of the State, indicate that pneumonia, consumption of lungs, diarrhœa, and whooping-cough increased, and that remittent fever, bronchitis, tonsilitis, neuralgia, and typho-malarial fever decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week ended May 4 and since, at eight places; scarlet fever at twenty-two places; enteric fever at five places; measles at four places. The case of small-pox at the hospital near Detroit is reported well.

Detroit.—Month of April, 1889. Population 230,000. Total deaths

256, including croup, 5; diphtheria, 3; erysipelas, 3; measles, 2; whooping-cough, 1; and scarlet fever, 4.

OHIO—*Cincinnati.*—Month of April, 1889. Population, 325,000. Total deaths, 534, including croup, 7; diarrhœa, 4; diphtheria, 33; erysipelas, 2; measles, 5; scarlatina, 3; enteric fever, 19; and whooping-cough, 2.

MISSOURI—*St. Louis.*—Month of April, 1889. Population, 440,000. Total deaths, 660, including measles, 2; scarlatina, 8; diphtheria, 30; croup, 9; whooping-cough, 11; enteric fever, 9; diarrhœal diseases 16; erysipelas, 5.

KENTUCKY—*Louisville.*—Month ending May 4, 1889. Population, 227,000. Total deaths, 344, including diarrhœa, 1; diphtheria, 4; dysentery, 2; erysipelas, 1; enteric fever, 9; measles, 6; varicella, 1; whooping-cough, 14.

IOWA—*Davenport.*—Month of April, 1889. Population, 33,715. Total deaths 28, including croup, membranous, 1; croup, diphtheretic, 5; diphtheria, 5; erysipelas, 1.

COLORADO—*Denver.*—Month of April, 1889. Population, 100,000. Total deaths, 112, including croup, 1; diphtheria, 3; enteric fever, 1; measles, 2; scarlatina, 2; and small-pox, 3.

CONNECTICUT—*New Haven.*—Month of April, 1889. Population, 85,000. Total deaths, 145, including scarlet fever, 2; diphtheria and croup, 11; diarrhœal diseases, 1.

CALIFORNIA—*Sacramento.*—Month of April, 1889. Population, 35,000. Total deaths, 26, including diarrhœa 1; erysipelas, 1; and enteric fever, 2.

San Francisco.—One death from leprosy was reported during the week ended May 3, 1889.

MASSACHUSETTS—*Worcester.*—Month of April, 1889. Population, 82,000. Total deaths, 120, including erysipelas, 2; diphtheria, 3; measles, 1; and whooping-cough, 2.

RHODE ISLAND—*Newport.*—Month of April, 1889. Population, 22,000. Total deaths, 28, including diphtheria, 3.

TENNESSEE—*Chattanooga.*—Month of April, 1889. Population, 40,000. Total deaths, 39, including croup, 1; diarrhœa, 1; and enteric fever, 2.

TEXAS—*San Antonio.*—Month of April, 1889. Population, 50,000. Total deaths, 73, including croup, 1; dysentery, 1; measles, 4; and whooping-cough, 1.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	May 11	1,565,196	782	.....	.....	1	.....	.....	.....	4	48	43	8	24
Chicago, Ill	May 11	830,000	328	.....	.....	1	.....	.....	.....	2	4	11	13	4
Brooklyn, N. Y.	May 11	821,525	415	.....	.....	.....	.....	1	.....	2	10	18	10	5
Baltimore, Md	May 11	500,343	146	.....	.....	.....	.....	.....	.....	5	4	2	1	.....
San Francisco, Cal.	May 3	330,000	107	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Detroit, Mich.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ohio	May 11	325,000	142	.....	.....	.....	.....	.....	.....	2	2	12	1	.....
New Orleans, La.	May 4	254,000	141	.....	.....	.....	.....	.....	.....	1	.....	5	.....	2
Washington, D. C.	May 4	225,000	67	.....	.....	.....	.....	.....	.....	1	1	1	.....	1
Washington, D. C.	May 11	225,000	92	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....
Milwaukee, Wis.	May 11	210,000	53	.....	.....	.....	.....	.....	.....	3	1	1	1	.....
Minneapolis, Minn.	May 4	200,000	45	.....	.....	.....	.....	.....	.....	3	1	9	.....	.....
Newark, N. J.	May 7	182,457	91	.....	.....	.....	.....	.....	.....	4	16	28	.....	.....
Kansas City, Mo.	May 11	180,000	36	.....	.....	1	.....	.....	.....	.....	.....	1	1	.....
Providence, R. I.	May 11	127,000	52	.....	.....	.....	.....	.....	.....	.....	.....	2	1	2
Rochester, N. Y.	May 11	120,000	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Denver, Colo.	May 10	100,000	28	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....
Richmond, Va.	May 11	100,000	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Toledo, Ohio	May 10	83,500	26	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Nashville, Tenn.	May 11	65,153	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	May 11	65,000	20	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Charleston, S. C.	May 11	60,145	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynn, Mass	May 11	50,000	14	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Manchester, N. H.	May 4	42,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	May 11	42,000	12	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Galveston, Tex.	May 3	40,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	May 4	33,715	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	May 11	33,715	6	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Binghamton, N. Y.	May 11	30,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	May 4	30,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	May 11	30,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	May 11	26,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	May 11	25,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Newport, R. I.	May 9	22,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	May 11	21,553	5	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Keokuk, Iowa	May 11	16,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	May 4	35,000	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Council Bluffs, Iowa	May 11	35,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	May 11	15,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 21. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., May 24, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended May 24, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended May 4, corresponded to an annual rate of 19.4 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Leicester, viz., 13.2, and the highest in Blackburn, viz., 32.3 a thousand. Diphtheria caused 2 deaths in Liverpool, 3 in Manchester, 2 in Bolton, and 2 in Preston.

London.—One thousand three hundred and eighty-six deaths were registered during the week, including measles, 68; scarlet fever, 15; diphtheria, 21; whooping-cough, 55; enteric fever, 5; diarrhœa and dysentery, 12. The deaths from all causes corresponded to an annual rate of 16.6 a thousand. Diseases of the respiratory organs caused 242 deaths. In greater London 1,742 deaths were registered, corresponding to an annual rate of 16.1 a thousand of the population. In the "outer ring" the deaths included measles, 30; and whooping-cough, 5.

Scotland.—The deaths registered in 8 principal towns during the week ended May 4, corresponded to an annual rate of 22.3 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Leith, viz., 11.6, and the highest in Paisley, viz., 29.9 a thousand. The aggregate number of deaths registered from all causes was 570, including measles, 33; diphtheria, 6; whooping-cough, 47; fever, 2; and diarrhœa, 16.

Malta and Gozo.—One hundred and ninety-nine deaths were registered during the period from 1st to 15th April, 1889, including measles, 16; whooping-cough, 2; diphtheria, 2; and dysentery, 2.

FRANCE—*Marseilles.*—Nine hundred and fifty-five deaths were registered during the month of April, 1889, in a population of 375,378. The deaths included small-pox, 15; enteric fever, 16; diphtheria and croup, 36; measles, 52; whooping-cough, 4; and diarrhœa, 26. The public health is about average. Small-pox is confined to a small quarter of the city, and is under control.

GERMANY—*Bremen.*—The United States consul, in his despatch, under date of May 3, 1889, says:

I have the honor to inform the Department that the German steamship "Berlin," of the North German Lloyd Steamship Company's South American line, arriving here from the Brazils, had had yellow fever among the crew and passengers on board; of which three of the crew died. The newspaper report "that yellow-fever stricken patients have been landed in the hospitals here from on board the 'Berlin'" is without foundation. I personally investigated the matter thoroughly, but thought it prudent to require that none of the crew or cargo of said company's steamer "Berlin" be transferred to their steamships bound for ports in the United States. As I am informed that yellow fever is epidemic in Santos, Rio de Janeiro, and Bahia, Brazil, I deem it my duty to do all I can to prevent the possibility of contagious diseases being transferred from these South American line steamers (or any others) to the New York or Baltimore lines, and therefore beg to refer to my despatch No. 90, under date of June 5, 1888, regarding medical inspection of vessels, crew, cargo, and passengers.

[Extract from the New York Herald of May 2, 1889.]

Yellow Fever on a German Ship.—Bremerhaven, May 1.—The North German Lloyd steamer "Berlin" has arrived here from the Brazils. Three of the crew died of yellow fever during the voyage. Three officers and twenty-eight of the crew suffering from the same disease have been sent to the town hospital.

DUTCH GUIANA—*Paramaribo.*—Seventy-seven deaths were registered during the month of March, 1889, including consumption, 20; chronic diseases of digestive organs, 8; malignant fever, 1; anæmia, 1; dropsy, 2; heart disease, 4; liver diseases, 3; kidney diseases, 2; cancer, 3.

DEMERARA—*Georgetown.*—One hundred and sixty-eight deaths were registered during the month of March, 1889. The prevailing diseases were malarial, enteric, renal, and pulmonary.

CUBA—*Cardenas.*—*May* 16, 1889.—Warm weather, with occasional rains. Good health in town and harbor.

Havana.—Five deaths from yellow fever were registered during the week ended May 17, 1889.

BAHAMAS—*Nassau, N. P.*—*May* 11, 1889.—City is healthy.

PHILIPINE ISLANDS.—Unofficial advices, received by steamer from Hong Kong, April 10, 1889, arriving at San Francisco May 10, state that the epidemic of cholera at Zamboanga has come to an end, and a public

thanksgiving has been held in consequence. From the 26th of January to the 23d of March 2,136 cases occurred, of which 1,106 proved fatal. Some suspicious cases have occurred at Manila, but at a meeting of the board of health, held on the 2d of April, it was resolved that the state of affairs was not sufficiently alarming to require the suspension of the issue of clean bills of health to vessels leaving the port.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	May 4	5,642,015	1,742	.....	.....	.....	2	18	617	.....	.....	.....
Paris	May 4	2,260,945	984	.....	.....	3	.....	7	1	43	31	7
Glasgow	May 4	545,678	290	.....	.....	.....	.....	2	.....	1	.....	.....
Warsaw	Apr. 27	445,770	195	.....	.....	3	.....	.....	2	4	.....	.....
Calcutta	Apr. 6	433,219	201	30	.....	4	.....	.....	.....	.....	.....	.....
Amsterdam	May 4	399,051	187	.....	.....	.....	.....	.....	.....	2	.....	.....
Copenhagen	Apr. 27	307,000	127	.....	.....	.....	.....	.....	1	4	.....	.....
Palermo	May 4	250,000	78	.....	.....	.....	.....	.....	3	.....	.....	.....
Rotterdam	May 4	197,724	101	.....	.....	.....	.....	.....	.....	.....	5	.....
Genoa	May 4	179,894	98	.....	.....	1	.....	.....	1	1	.....	.....
Toronto	May 11	175,000	58	.....	.....	.....	.....	.....	.....	2	.....	.....
Trieste	Apr. 20	154,500	81	.....	.....	.....	.....	.....	.....	2	.....	.....
Trieste	Apr. 27	154,500	88	.....	.....	.....	.....	1	.....	1	.....	.....
Stuttgart	May 4	125,510	68	.....	.....	.....	.....	.....	3	2	.....	.....
Havre	May 4	112,074	66	.....	.....	.....	.....	4	.....	.....	.....	.....
Barmen	Apr. 27	109,000	41	.....	.....	.....	.....	.....	.....	1	1	.....
Barmen	May 4	109,000	46	.....	.....	.....	.....	.....	.....	.....	5	.....
Leghorn	May 5	102,893	41	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Apr. 27	65,802	26	.....	.....	.....	1	.....	.....	2	.....	.....
Cadiz	May 4	65,028	39	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	May 9	23,800	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Apr. 28	23,681	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	May 5	23,681	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	May 10	17,300	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	May 17	17,300	4	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

Florida.—The following report is published as showing the efficient character of the work now being done in Florida under the auspices of the State board of health:

STATE BOARD OF HEALTH,
Jacksonville, Fla., May 21, 1889.

SIR: I inclose herewith for your information a copy of "Report of suspicious case of fever at Palmetto, Fla., and sanitary condition of villages of Braidentown and Manatee, Fla."

Yours truly,

JOSEPH Y. PORTER, M. D.,
Health Officer State of Florida.

Surgeon-General JOHN B. HAMILTON,
United States Marine-Hospital Service.

Report of suspicious case of fever at Palmetto, Fla., and sanitary conditions of villages of Braidentown and Manatee.

BRAIDENTOWN, FLA., *May* 18, 1889.

MY DEAR DOCTOR: Complying with your instructions to visit Palmetto, Fla., and investigate the "suspicious case of fever" reported by Doctor Harrison, of that place, by telegraph, on the 16th instant, I desire to inform you that I arrived here yesterday, the 17th instant, touching at Palmetto wharf, where I saw Doctor Harrison for a few minutes, and informed him I would be over from Braidentown later in the day. At 3 p. m. I crossed the river, met the doctor, and visited the patient, whom I found to be Miss Marie Cloud, 14 years of age, and the history of the case up to my arrival, as learned from the notes of three observers, I affix to this communication for your information. I carefully questioned the patient, her friends, and Doctor Harrison, besides making a minute examination of the case, which included an inspection and test of the urine, and the diagnosis arrived at was *not* one of yellow fever, but that of typho-malarial fever. At the time of my visit, 3.15 p. m., her temperature, taken with a Hicks self-registering minute clinical thermometer, was 102⅘, and pulse 112 beats to the minute. She then had severe headache, much thirst, no nausea; eyes very slightly watery, but decidedly clear cornea; no injection; considerable enlargement of both liver and spleen, with great tenderness upon percussion; tongue clean but red, and with a tendency to dryness at tip and edges; gums firm, with no disposition to bleed, even upon firm pressure with the finger-nail; bowels constipated, and complained of pain and soreness over the abdomen. On my visit at 6 a. m. this date I found patient feeling better; had passed a quiet, restful night. Temperature at 6.30 a. m. 99⅕, pulse 110 beats to the minute, kidneys acting freely, and urine lighter in color and of greater quantity. My diagnosis of yesterday is confirmed, and I so informed Doctor Harrison, who now agrees with me in opinion. The type of fever promises to be remittent. I learn that this is the first case of fever of any kind occurring in Palmetto since November 19, 1888. The number of cases of yellow fever in Palmetto in 1888, Doctor Harrison informs me to have been 85, with 11 deaths. I visited and inspected Manatee and Braidentown, in company with Judge E. M. Graham, president Manatee County board of health. Particular inspection was made of those houses reported on and against by Surgeon Murray, of the United States Marine-Hospital Service, who had charge of the Government relief measures at Manatee last summer. I am decidedly of the opinion that those houses would be a menace to the public health of any community at any time, and particularly so in this instance, as cases of yellow fever were treated in them in Manatee and Palmetto; accordingly, I will condemn them, and will order a valuation placed upon them, in accordance with the requirements of the statute. I will also condemn and order disused a public well in the town of Manatee, located just below the village cemetery, and on an incline from the same to the river. I am of the impression, from the facts that I can glean, that all the cases of fever of a low, continued type, occurring in the village of Manatee, are due to the use of the water from this well for drinking purposes, and those families who have been in the habit of using this water have been noticed to suffer quite severely from typhoid fever. I have approved of a regulation or order by the county

board of health, which states: "For precautionary reasons, no unacclimated person or persons, not having had yellow fever, shall this summer remain in the villages of Manatee or Palmetto over night." In conclusion, I desire to say that I am very favorably impressed with the desire and purpose of the county board of health, and the citizens as well, to leave nothing undone in the way of sanitation, to prevent a recurrence of the fever of last year.

Very truly yours,

JOSEPH Y. PORTER, M. D.,
State Health Officer.

DR. R. P. DANIEL,
President State Board of Health, Jacksonville, Fla.

SOUTH CAROLINA.—The following quarantine regulations of the South Carolina State board of health are published for the information of all concerned.

Sections VII and VIII will not be enforced unless specially ordered by the State board of health:

OFFICE OF STATE BOARD OF HEALTH OF SOUTH CAROLINA,
Charleston, S. C., January 15, 1884.

From and after this date the following charges and rules for the government of quarantine at the several ports of the State will be enforced:

[From general statutes of South Carolina, as amended December 24, 1883.]

SECTION 985. The following uniform schedule of charges is hereby adopted for quarantine dues for all ports of the State, the amount collected to be expended for the more effective enforcement of quarantine at each port, to-wit:

For every vessel boarded and inspected, $3. For every vessel of 100 tons or less, fumigating and disinfecting, each process, $10. For every vessel over 100 tons and less than 250 tons, fumigating and disinfecting, each process, $14. For every vessel over 250 tons and less than 500 tons, fumigating and disinfecting, each process, $20. For every vessel over 500 tons and less than 750 tons, fumigating and disinfecting, each process, $28. For every vessel over 750 tons and less than 1,000 tons, fumigating and disinfecting, each process, $34. For every vessel over 1,000 tons and less than 1,250 tons, $40. For every vessel over 1,250 tons, fumigating and disinfecting, according to tonnage of vessel, each process, $44 to $68.

In all cases the quarantine officer will collect the charges made against vessels before giving permission to leave quarantine, either by captain's draft on consignee, or in currency, and shall return the same to the board charged with the administration of quarantine at such port, who shall be responsible for the disbursement of the same.

Quarantine Code.

I. On and after the opening each year of the national quarantine station (Sapelo Sound), all vessels from infected or suspected latitudes arriving with plague, cholera, small-pox, yellow or typhus fevers on board, or having had same during voyage, must be directed by the pilot to proceed to said national quarantine station.

II. Any vessel arriving at any port bearing the certificate of the national quarantine officer, must be brought to anchor at the quarantine station, and there remain until released by the order of the quarantine officer.

III. During the closure of said national quarantine station, all vessels such as above described must anchor at the port quarantine station, under personal direction of the quarantine officer.

IV. Vessels from any foreign port direct, or via American ports, with or without sickness on board, will, during the entire year, be compelled to anchor and remain at the quarantine station until released by written permit of the quarantine officer.

V. All vessels arriving at any port with sickness on board, or having had same during voyage, will, at all seasons of the year, no matter from what port, either American or foreign, anchor at the quarantine station, and there remain until released by order of the quarantine officer of the port.

VI. Vessels from infected or suspected latitudes will, during the entire year, be required to discharge any and all ballast at the quarantine station, or such other place as may be designated by the health authorities, to have bilges and limbers cleaned and sweetened. From November 1 to May 1 of each year, said vessels shall be subjected to at least one fumigation. From May 1 to November 1 of each year, said vessels shall be subjected to at least two fumigations, and such other disinfection as may be necessary, and be detained at least 10 days during said latter period.

VII. On and after May 1 and until November 1 of each year, and longer if the State board of health so determine, all coastwise vessels or steamers from latitudes south of Cape Hatteras, other than those by inland route, must anchor at the quarantine station. Steamers and vessels from non-infected or non-suspected ports will not be detained longer than necessary for the quarantine officer to satisfy himself of their perfect sanitary condition.

VIII. Coastwise steamers and vessels arriving at this port by inland route, from latitudes south of Cape Hatteras, between May 1 and November 1, and later if the State board of health so determine, must be inspected and given permits by the quarantine officer before the landing of either passengers or freight.

IX. From May 1 to November 1 of each year, no vessel from an infected or suspected latitude will be allowed to either lighter or bring cargo of fruit up from quarantine station.

X. Pilots must in each case before boarding make inquiry as to the sanitary condition of vessels; in no case must they board if the vessel has contagious or infectious sickness on board, or has had same during voyage; in such cases they must either direct to Sapelo quarantine station, lead the vessel in, or have their small boat hoisted alongside clear of the water, and in this way pilot the vessel in.

MISSISSIPPI.—

Rules and Regulations of the Mississippi State Quarantine at the Ports of Hancock and Harrison Counties.

1. The quarantine station for the counties of Hancock and Harrison shall be on Ship Island, and all vessels subject to quarantine shall anchor as near to said station as the water will permit, in accordance

with the instructions of the quarantine physician; and it shall be the duty of pilots to anchor all vessels in accordance with these rules and regulations, and the instructions of the quarantine physician.

2. All vessels arriving from foreign ports, and all vessels having sickness on board, desiring to enter or load from any port in Hancock and Harrison Counties, shall immediately proceed to the boarding station, and shall be visited by the quarantine physician between sunrise and sunset as soon as possible after arrival.

3. No person on board of any vessel arriving at the boarding station, shall be allowed to communicate with any person on board another vessel, or with any other person, until such vessel has been visited by the quarantine physician, nor shall any person off of land or other vessel, be allowed to communicate with said vessel until a permit has been obtained from the quarantine physician.

4. The quarantine physician shall carefully inspect all vessels arriving at the boarding station, and require answers from the officer in command, and keep a record of such answers to the following questions:

Port of departure and date of departure.

Name of vessel, name of commander, sanitary condition and destination.

Number of days of passage.

Ports visited since leaving port of departure, with date and length of visit.

Cargo and where taken on; kind and sanitary condition.

Bilge water, whether clean or unclean.

Ballast, kind and condition.

Number of officers, passengers, and crew, and their sanitary condition.

What sickness has occurred on board vessel during passage, or in port, and dates of sickness?

Deaths during passage, or in port, with dates and causes, if known.

Names of vessels communicated with, in the course of passage, with dates of such communications and names of ports from which said vessels sailed, also whether there was any sickness on board said vessels, and the character of the sickness, if known.

5. All vessels, together with their cargoes, passengers, crews, and baggage, arriving at the boarding station from the inter-tropical American and West India Island ports, shall be subjected to thorough maritime sanitation, according to the following classification:

First Class.—Vessels arriving from non-infected ports shall be subject to thorough sanitation without detention longer than is necessary to place them in such condition.

Second Class.—Vessels arriving from suspected ports shall be subject to thorough sanitation with detention for a period of five (5) days from the time disinfection has been completed.

Third Class.—Vessels arriving from infected ports shall be taken to the refuge station of the United States Government, and placed in charge of the Marine-Hospital Service, to remain until securing a clean bill of health from the officer in charge.

Fourth Class.—Vessels arriving infected, without regard to port of departure; that is, vessels which have yellow fever or other contagious or infectious diseases on board at time of arrival, or have had the same during the voyage, or while at port, shall be taken to the refuge station

of the United States Government and placed in charge of the Marine-Hospital Service, to remain until securing a clean bill of health from the officer in charge.

6. Supplies and mail intended for vessels in quarantine, or for the quarantine service, shall be delivered at some suitable point between the main land and the quarantine station, and after the departure of persons delivering such supplies and mail, the same may be obtained and delivered to the proper vessel or service under the direction of the quarantine physician.

7. All lighters and persons engaged in removing ballast from vessels in quarantine shall remain in quarantine for such a period as may be determined by the quarantine physician. But no such lighters or persons shall be released from quarantine within a less period than the vessel from which ballast is taken is required to remain.

8. No person on board any vessel in quarantine shall be allowed to communicate with another vessel or any person on board another vessel in quarantine, without the written permission of the quarantine physician.

9. No boat shall approach within one-half mile of any vessel coming into Ship Island Pass until such vessel shall have been visited by the quarantine physician, except authorized pilots, and they only for the purpose of piloting such vessels into port, and tow-boats under the direction of the quarantine physician. Nor shall pilots transact any other business except that necessary to their piloting business, and when waiting for a vessel they must always keep to windward when stress of weather does not prevent, and keep well off from incoming vessel until known to be safe.

10. All vessels when discharged from quarantine, shall remove at least one mile from quarantine limits (said limits to be designated by suitable buoys) and as directed by the quarantine physician.

11. No officer or person in charge of any vessel in quarantine shall allow any person, boat or craft, propelled by steam or otherwise, to come alongside or on board his vessel without the written permission of the quarantine physician.

12. The quarantine physician shall select a suitable point near the quarantine station to be designated as a boarding station, and shall cause suitable instructions to be issued to all pilots regarding the same.

13. The quarantine physician shall charge a fee of five dollars for each vessel inspected, and a fee of ten dollars for each vessel disinfected, and the cost of materials used in such disinfection.

14. Any person violating these rules shall be subject to a fine of not exceeding three hundred dollars nor less than twenty-five dollars. And quarantine physician shall at once take necessary steps to prosecute all offenders either before State or United States district attorneys, as provided by law.

ALABAMA—*Mobile.*—Month of April, 1889. Population, 40,000. Total deaths, 69, including whooping-cough, 1; erysipelas, 1; and enteric fever, 2.

CALIFORNIA—*City and County of San Francisco.*—Month of April, 1889. Estimated population, 330,000. Total deaths, 478, including

croup, 3; diarrhœa, 1; diphtheria, 8; erysipelas, 3; enteric fever, 13; scarlatina, 2; and whooping-cough. 3.

Sacramento.—Reports to the State board of health from fifty-eight cities and towns, having an aggregate population of 701,950, show a total of 835 deaths from all causes during the month of April, 1889. The deaths included diarrhœa and dysentery, 8; diphtheria, 19; scarlet fever, 4; croup, 6; whooping-cough, 6; enteric fever, 23; and erysipelas, 4.

San Diego.—Month of March, 1889. Estimated population, 32,000. Total deaths, 13, including 1 from dysentery.

CONNECTICUT.—Month of April, 1889. Reports from one hundred and sixty-six cities and towns, having an aggregate population of 756,522, show a total mortality of 1,073, including measles, 12; scarlet fever, 11; diphtheria and croup, 71; whooping-cough, 8; erysipelas, 3; enteric fever, 10; and diarrhœa, 5. Cerebro-spinal fever, diphtheria, and enteric fever have been less fatal than in March, while measles and scarlet fever were somewhat more so. There were 127 deaths from pneumonia, against 138 in March; and 134 deaths from consumption, being 9 more than in March.

GEORGIA—*Savannah.*—Month of April, 1889. Population, 57,000. Total deaths, 90, including diarrhœa, 1; and dysentery, 2.

IOWA—*Dubuque.*—Month of April, 1889. Population, 35,000. Total deaths, 23, including dysentery, 1; and erysipelas, 1.

MICHIGAN.—Week ended May 11, 1889. Reports to the State board of health, Lansing, from fifty-seven observers, in different parts of the State, indicate that whooping-cough increased and pneumonia decreased in area of prevalance. Including reports by regular observers and others, diptheria was reported present during the week ended May 11, and since, at eight places; scarlet fever at seventeen places; enteric fever, at five places; and measles, at four places.

Grand Rapids.—Month of April, 1889. Population, 70,000. Total deaths, 61, including scarlet fever, 1; pernicious fever 1; and enteric fever, 3.

NEW YORK—*Rochester.*—Month of April, 1889. Total deaths, 169, including membranous croup, 4; diphtheritic croup, 2; diarrhœa, 2; diphtheria, 11; erysipelas, 1; and whooping-cough, 8.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	May 18	1,566,068	744	.....	.....	.....	.....	.....	.....	6	25	44	7	12
Philadelphia, Pa.	May 18	1,040,245	420	.....	.....	.....	.....	.....	.....	17	5	5	6	7
Chicago, Ill	May 18	830,000	283	.....	.....	.....	.....	1	.....	4	4	16	7	1
Brooklyn, N. Y.	May 18	821,555	345	.....	.....	.....	.....	.....	.....	.....	11	22	5	6
Baltimore, Md	May 18	500,343	144	.....	.....	.....	.....	.....	.....	1	1	2	.....	.....
Cincinnati, Ohio	May 18	325,000	134	.....	.....	.....	.....	.....	.....	3	.....	7	2	.....
San Francisco, Cal.	May 10	330,000	109	.....	.....	.....	.....	.....	.....	1	.....	2	.....	3
New Orleans, La.	May 11	254,000	135	.....	.....	.....	.....	.....	.....	.....	.....	3	1	1
Cleveland, Ohio	Apr. 20	235,000	85	.....	.....	.....	.....	.....	.....	1	.....	8	.....	2
Cleveland, Ohio	Apr. 27	235,000	91	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	1
Pittsburgh, Pa.	May 18	230,000	66	.....	.....	.....	.....	.....	.....	3	1	2	3	.....
Detroit, Mich.	May 11	230,000	68	.....	.....	.....	.....	.....	.....	.....	3	2	.....	.....
Louisville, Ky.	May 11	227,000	78	.....	.....	.....	.....	.....	.....	2	.....	1	4	2
Washington, D. C.	May 18	225,000	.....	.....	.....	.....	.....	.....	.....	2	2	1	.....	1
Milwaukee, Wis.	May 18	210,000	58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minneapolis, Minn.	May 11	200,000	49	.....	.....	.....	.....	.....	.....	.....	1	3	.....	.....
Newark, N. J.	May 14	182,457	80	.....	.....	.....	.....	.....	.....	1	2	9	.....	.....
Kansas City, Mo.	May 18	180,000	34	.....	.....	1	.....	.....	.....	1	.....	.....	.....	1
Rochester, N. Y.	May 18	130,000	31	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Providence, R. I.	May 18	127,000	41	.....	.....	.....	.....	.....	.....	.....	1	5	1	.....
Richmond, Va.	May 18	100,000	26	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Denver, Colo.	May 17	100,000	33	.....	.....	.....	.....	.....	.....	.....	1	3	.....	.....
Nashville, Tenn.	May 18	65,153	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	May 18	65,000	20	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	.....
Charleston, S. C.	May 18	60,145	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynn, Mass	May 18	50,000	26	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Portland, Me.	May 18	42,000	14	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Manchester, N. H.	May 11	42,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	May 20	35,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	May 18	33,715	8	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Binghamton, N. Y.	May 20	30,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	May 18	30,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	May 18	26,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	May 18	25,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	May 16	22,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	May 18	21,553	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	May 18	16,000	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 22. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., May 31, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended May 31, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended May 11, corresponded to an annual rate of 18.8 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Cardiff, viz., 14.8, and the highest in Halifax, viz., 32.2 a thousand. Diphtheria caused 2 deaths in Salford, 2 in Manchester, 2 in Bolton, and 2 in Portsmouth.

London.—One thousand two hundred and ninety-five deaths were registered during the week, including measles, 60; scarlet fever, 10; diphtheria, 23; whooping-cough, 37; enteric fever, 5; diarrhœa and dysentery, 10. The deaths from all causes corresponded to an annual rate of 15.5 a thousand. Diseases of the respiratory organs caused 213 deaths. In greater London 1,649 deaths were registered, corresponding to an annual rate of 15.3 a thousand of the population. In the "outer ring" the deaths included measles, 15; whooping-cough, 6; and diphtheria, 7.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended May 11, in the 16 principal town districts of Ireland, was 26.6 a thousand of the population. The lowest rate was recorded in Armagh, viz., 0.0, and the highest in Limerick, viz., 39.2 a thousand. In Dublin 185 deaths were registered, including whooping-cough, 3; enteric fever, 3; dysentery, 1; erysipelas, 1; and scarlet fever, 2.

Scotland.—The deaths registered in 8 principal towns during the week ended May 11, corresponded to an annual rate of 21.2 a thousand of the population, which is estimated at 1,314,274. The lowest mortality

was recorded in Leith, viz., 12.3, and the highest in Paisley, viz., 30.8 a thousand. The aggregate number of deaths registered from all causes was 541, including measles, 22; scarlet fever, 5; diphtheria, 6; whooping-cough, 36; fever, 5; and diarrhœa, 3.

URUGUAY—*Montevideo.*—Three hundred and forty deaths were registered during the month of March, 1889, in an estimated population of 164,028, including small-pox, 2; enteric and typhus fever, 13; and diphtheria, 13. The sanitary condition of the city was good.

During the month of February 329 deaths were registered, including small-pox, 2; enteric and typhus fever, 7; and diphtheria, 20.

BAHAMAS—*Nassau, N. P.*—*May* 18, 1889.—No prevailing diseases of importance. City very healthy.

WEST INDIES—*Barbadoes.*—*May* 4, 1889.—Health of Island good.

CUBA—*Cardenas.*—*May* 23, 1889.—Weather warm and dry. Good health in town and harbor.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	May 16	5,642,015	1,649	.....	.....	.....	.....	5	11	30	75	.....
Paris	May 11	2,260,945	951	.....	.....	4	.....	8	.....	28	31	8
Glasgow	May 15	545,678	253	.....	.....	.....	.....	1	4	3	.....	.....
Warsaw	May 4	445,770	215	.....	.....	2	.....	.....	2	6	.....	.....
Rome	Mar. 30	401,044	174	.....	.....	3	.....	4	.....	.....	.....	.....
Rome	Apr. 6	404,449	200	.....	.....	3	.....	2	1	4	.....	.....
Amsterdam	May 11	399,051	177	.....	.....	.....	1	.....	.....	2	.....	.....
Copenhagen	May 4	307,000	149	.....	.....	.....	.....	1	.....	4	.....	.....
Palermo	May 11	250,000	93	.....	.....	.....	.....	.....	3	3	.....	.....
Belfast	May 11	229,622	126	.....	.....	.....	.....	2	.....	.....	.....	.....
Rotterdam	May 11	197,724	115	.....	.....	.....	.....	.....	.....	.....	3	.....
Genoa	May 11	179,915	91	.....	.....	1	2	.....	1	1	.....	.....
Trieste	May 4	154,500	63	.....	.....	.....	.....	.....	.....	1	.....	.....
Stuttgart	May 11	125,510	61	.....	.....	.....	.....	.....	5	10	.....	.....
Pernambuco	Apr. 16	120,000	103	.....	3	1	.....	2	1	.....	.....	.....
Pernambuco	Apr. 23	120,000	112	.....	1	.....	.....	1	2	.....	.....	.....
Havre	May 11	112,074	64	.....	.....	4	.....	3	.....	.....	.....	.....
Barmen	May 11	109,000	54	.....	.....	.....	.....	.....	.....	1	6	.....
Leghorn	May 12	102,893	39	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	May 11	65,028	44	.....	.....	.....	.....	.....	.....	.....	.....	.....
Curaçao	May 15	25,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	May 16	23,800	24	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	Apr. 27	13,000	6	.....	.....	.....	.....	.....	.....	1	.....	.....
Cartagena, Col	May 4	13,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	May 11	13,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	May 11	7,428	8	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

Report of Sanitary Inspection of Macclenny, Fla.

JACKSONVILLE, FLA., *May* 20, 1889.

SIR: A recent inspection of the town of Macclenny, Fla., shows an improved and satisfactory sanitary condition, and entire immunity from

the presence of infectious and contagious diseases. Active measures are being taken to ameliorate the local conditions of defective drainage, and the former lax system of removal of garbage and excrementitious matter, which unquestionably contributed largely to the rapid spread and fatal character of the epidemic of yellow fever of last year. The municipal health authorities are enforcing strict cleanliness of premises, draining the low areas, and contemplate burning the sawdust heaps contiguous to the ponds and lagoons within the corporate limits of their town. They are firmly impressed with the importance of maintaining a higher standard of municipal sanitation than that of the past, which recalls the sad and costly experiences resulting from their strange indifference to the most ordinary sanitary precautions. During the month of January last every house, public and private, where "the fever" had prevailed was visited by myself or inspectors appointed by me, and all infected material removed and destroyed, and the rooms of each dwelling as thoroughly saturated with the fumes of sulphur as their structure permitted. In addition to fumigation with sulphur, the floors and walls of houses where deaths and cases were numerous, were washed and sprayed with a solution of mecuric chloride, in proportion of 1 to 1,000; and carpets, rugs, lounges, woolen curtains, blankets, after being washed, were sprayed with a similar solution of 1 to 2,000. During my sojourn at Macclenny frost and ice occurred repeatedly, and all the dwellings were thoroughly aerated at night. I feel assured that owing to the liberal manner in which the Government acted toward the owners of infected household material, and the least possible inconvenience to which they were subjected in the disinfection of their dwellings, that no infected house or material escaped the necessary and highly efficient methods adopted by the head of that department of the government under whose direction this delicate and difficult work was accomplished. An interesting illustration, I think, is furnished of the thoroughly efficient treatment of a certain class of infected household goods, viz., feather-beds, pillows, bolsters, &c., which could not be easily replaced except at considerable cost, which were sent in a special car from this town to the Government laundry at Jacksonville, to be cleansed and renovated by the application of super-heated steam. A special apparatus had been devised for this purpose. The shipment comprised a half car-load of feather goods, nearly all of the packages being stained with the excreta and dejecta of the sick, and emitting, when accumulated in the car, in a very forcible manner, the peculiarly offensive and indescribable (urinous-sweaty) odor so familiar to the clinical student of yellow fever. After immersion in a disinfectant solution, steaming of the tickings, and subjection of the feathers to super-heated steam, the cargo was returned for redistribution, clean and absolutely odorless. It is my firm belief that this method is destructive of every vestige of infection contained in this class of goods, and combines the very important feature of economy. As a result of these effective methods of disinfection, and the destruction of infected material, that were practiced in this town, I entertain the highest degree of assurance that the disease, in an epidemic form, can only recur from a new importation of its morbific matter.

Very respectfully yours,

J. L. POSEY, M. D.,
U. S. Sanitary Inspector, Marine-Hospital Service.

To Surgeon-General J. B. HAMILTON,
U. S. Marine-Hospital Service.

SOUTH CAROLINA.—*Official Quarantine Notice.*

OFFICE STATE BOARD OF HEALTH OF SOUTH CAROLINA,
CHARLESTON, S. C., *April* 19, 1889.

The quarantine regulations of this State will be rigidly enforced from Wednesday May 1, at sunrise, and continue until Thursday October 31, at sunset, at the several ports of the State.

Section 948, general statutes of South Carolina: "That for the certain prevention of the introduction of disease into the several ports of the State, every vessel arriving from a foreign port or from a suspected or infected port of the United States shall immediately proceed to the quarantine station of the port of arrival and display a yellow flag, or the vessel's ensign in the rigging, and shall be visited by the Quarantine Officer between sunrise and sunset as soon as possible after such arrival."

Vessels having had yellow fever, cholera, or small-pox on board, either at *port of departure or during voyage*, or at time of arrival, will not be boarded by pilots, but shall be directed by them to the national quarantine refuge station at Blackbeard's Island, Sapelo Sound, on the Georgia coast. Pilots must anchor at the quarantine station all other such vessels that are subject to inspection. They will be held responsible for all violations of quarantine regulations after they have boarded any vessels until authorized to do so by the quarantine physician.

J. R. BRATTON, M. D.,
Chairman Executive Committee, State Board of Health.

Approved:
J. P. RICHARDSON,
Governor.

MISSISSIPPI.—The following letter has been received from A. Parker Champlin, M. D., State quarantine physician:

MISSISSIPPI STATE QUARANTINE SERVICE,
SHIP-ISLAND QUARANTINE STATION, *May*, 21, 1889.

SIR: Replying to yours of recent date, I will state that this station is for the treatment of all vessels subject to quarantine, with the exception of those infected, or from infected ports. Those from infected ports, or infected, are sent by me to your Chandeleur Island Station for treatment. I also inspect all incoming vessels, wherever they may be from. I send a copy of rules and regulations now in force.

Yours truly,
A. PARKER CHAMPLIN, M. D.
Quarantine Physician, Ship-Island Station.

(These rules and regulations were published in abstract No. 21, current series).

CALIFORNIA—*Los Angeles.*—Month of April, 1889. Population, 80,000. Total deaths, 46; including enteric fever, 3; and croup, 2.

MICHIGAN.—Reports to the State board of health, Lansing, from fifty-

nine observers, show that for the week ended May 18, 1889, measles, neuralgia, erysipelas and tonsilitis increased in area of prevalence, and that influenza, whooping-cough, diarrhœa, and consumption of lungs decreased. Including reports by regular observers and others, diphtheria was reported present during the week ended May 18, and since, at seven places; scarlet fever at twenty-two places; enteric fever at two places; and measles at eleven places.

NEW JERSEY—*Hudson County.*—Month of April, 1889. Estimated population, 282,254. Total deaths, 544, including scarlet fever, 22; diphtheria, 22; whooping-cough, 1; enteric fever, 8; malarial fevers, 4; and diarrhœal diseases, 7.

PENNSYLVANIA—*York.*—Month of April, 1889. Estimated population, 20,845. Total deaths, 22, including diphtheria, 1; and erysipelas, 1.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	May 25	1,566,940	684	.....	.....	.....	.....	.....	.....	4	36	52	5	11
Philadelphia, Pa.	May 25	1,040,245	339	.....	.....	.....	.....	.....	.....	15	5	2	5	3
Chicago, Ill	May 25	830,000	250	.....	.....	.....	.....	.....	.....	3	4	16	5	.....
Brooklyn, N. Y.	May 25	821,525	300	.....	.....	.....	.....	.....	.....	2	6	22	3	9
Baltimore, Md	May 25	500,343	123	.....	.....	.....	.....	.....	.....	5	.....	3	.....	.....
San Francisco, Cal.	May 17	330,000	112	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	2
San Francisco, Cal.	May 24	330,000	96	.....	.....	.....	.....	.....	.....	2	1	2	1	1
Cincinnati, Ohio	May 25	325,000	104	.....	.....	.....	.....	.....	.....	.....	.....	11	1	.....
New Orleans, La.	May 18	254,000	141	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1
Detroit, Mich.	May 18	230,000	69	.....	.....	.....	.....	.....	.....	1	1	2	.....	.....
Pittsburgh, Pa.	May 25	230,000	74	.....	.....	.....	.....	.....	.....	.....	2	2	1	2
Louisville, Ky.	May 25	227,000	59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Washington, D. C.	May 25	225,000	74	.....	.....	.....	.....	.....	.....	.....	2	.....	.....	1
Milwaukee, Wis.	May 25	210,000	48	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1
Minneapolis, Minn.	May 18	200,000	25	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....
Minneapolis, Minn.	May 25	200,000	34	.....	.....	.....	.....	.....	.....	.....	1	3	.....	.....
Newark, N. J.	May 21	182,457	72	.....	.....	.....	.....	.....	.....	1	1	6	6	.....
Newark, N. J.	May 28	182,457	80	.....	.....	.....	.....	.....	.....	1	4	5	1	1
Kansas City, Mo.	May 25	180,000	33	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Providence, R. I.	May 25	127,000	49	.....	.....	.....	.....	.....	.....	1	1	6	.....	.....
Richmond, Va.	May 25	100,000	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Denver, Colo.	May 24	100,000	28	.....	.....	1	.....	.....	.....	3	1	2	1	1
Toledo, Ohio	May 24	83,500	22	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Nashville, Tenn.	May 25	65,153	17	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Fall River, Mass.	May 25	63,000	25	.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....
Charleston, S. C.	May 25	60,145	34	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass	May 25	50,000	18	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Portland, Me.	May 25	42,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	May 18	42,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	May 10	40,000	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	May 25	33,715	3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Binghamton, N. Y.	May 25	30,000	6	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Auburn, N. Y.	May 25	26,000	12	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Haverhill, Mass.	May 25	25,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	May 25	21,553	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa	May 25	16,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Pensacola, Fla.	May 18	15,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 23. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., June 7, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended June 7, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended May 18, corresponded to an annual rate of 17.2 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Norwich, viz., 11.0, and the highest in Preston, viz., 38.1 a thousand. Diphtheria caused 4 deaths in Salford, 2 in Birmingham, 2 in Leeds, and 2 in New Castle upon Tyne.

London.—One thousand two hundred and thirty-one deaths were registered during the week, including measles, 53; scarlet fever, 7; diphtheria, 24; whooping-cough, 36; enteric fever, 7; diarrhœa and dysentery, 14. The deaths from all causes corresponded to an annual rate of 14.8 a thousand. Diseases of the respiratory organs caused 217 deaths. In greater London 1,509 deaths were registered, corresponding to an annual rate of 14.0 a thousand of the population. In the "outer ring" the deaths included measles, 8; and whooping-cough, 8.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended May 18, in the 16 principal town districts of Ireland, was 21.8 a thousand of the population. The lowest rate was recorded in Armagh, viz., 0.0, and the highest in Kilkenny, viz., 50.7 a thousand. In Dublin 170 deaths were registered, including measles, 2; whooping-cough, 4; enteric fever, 2; diarrhœa, 1; scarlet fever, 1; and typhus 1.

Scotland.—The deaths registered in 8 principal towns during the week ended May 18, corresponded to an annual rate of 21.5 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Greenock, viz., 15.9, and the highest in Aberdeen, viz., 26.5 a thousand. The aggregate number of deaths registered from all

causes was 550, including measles, 24; scarlet fever, 6; diphtheria, 8; whooping-cough, 37; fever, 4; and diarrhœa, 15.

During the month of April, 1889, there were 2,562 deaths registered in these towns, including whooping-cough, 198; typhus, 4; enteric fever, 11; measles, 150; diarrhœa and dysentery, 35; diphtheria, 26; and scarlatina, 13.

Malta and Gozo.—One hundred and forty-nine deaths were registered during the period from the 16th to 30th of April, 1889, including measles, 4; whooping-cough, 2; diphtheria, 1; and remittent fever, 1.

BRAZIL—*Rio de Janeiro.*—The United States consul-general, in his dispatch to the Department of State, under date of April 24, 1889, says: "We have had (so say the natives) the worst season ever known in the history of the city. The epidemic of yellow fever has moderated very much, yet there are still from 8 to 12 deaths from it per day, and many deaths from other kinds of fever; and while the death rate has reduced very much from what it was, yet the present rate is more than double the normal death rate of the city. We are needing rain very much, and there is in many parts of the city a lack of water. I trust, however, the worst is over for this season."

DENMARK.—The following quarantine order has been issued by the Danish Government, under date of May 8, 1889.

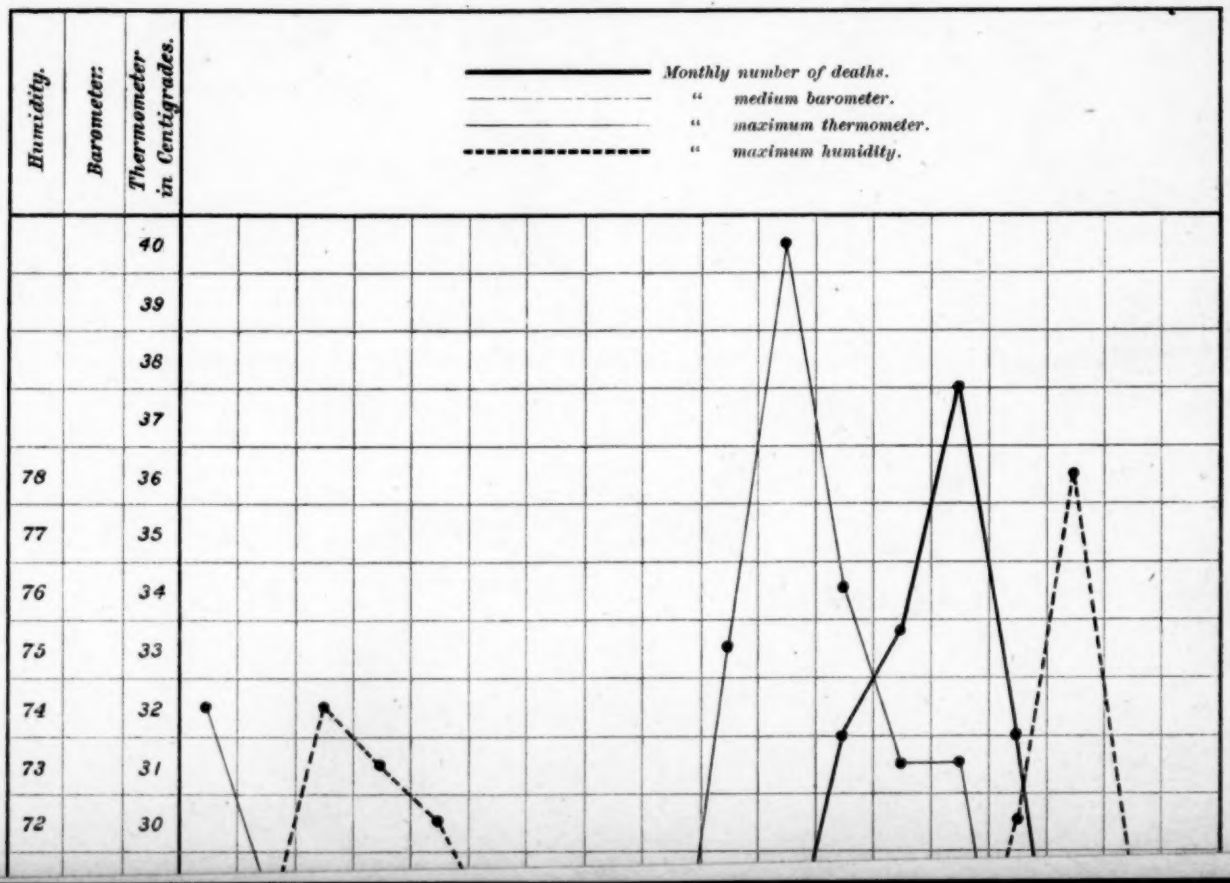
Information having been received that an epidemic of yellow fever has broken out along the whole coast of Brazil and Cuba, Hayti, and Porto Rico, the provisions of section 2, paragraph 1, of the law of July 2, 1880, referring to precautionary measures against the introduction of contagious diseases into the kingdom are enforced until further notice with reference to ships coming from or having touched ports in Brazil or ports of the above islands.

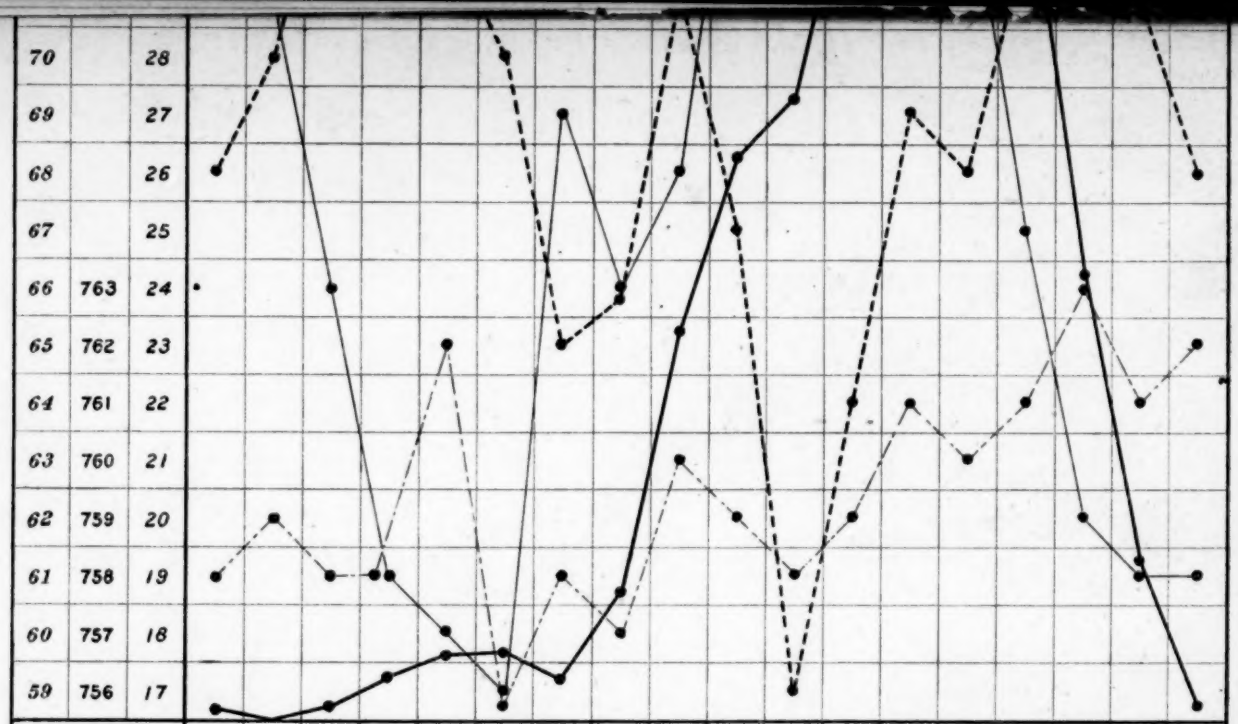
With reference to the same law, paragraph 32, the importation into the kingdom from said ports of used linen, used articles of clothing, and used bed-clothes (providing the articles named do not constitute the personal effects of travelers), waste cotton or wool, refuse paper, hair and hides, is forbidden; and special attention is to be paid to the cleansing under official inspection, of linen, clothing and bed-clothes brought from any of the named places as the personal effects of travelers. The orders of the ministry of justice, dated April 27, 1887, and March 12, 1889, requiring a general inspection according to section 2, paragraph 1, of the law of July 2, 1880, of ships coming from or having touched ports in Chili or Palma, are hereby discontinued, and the provisions of the same orders prohibiting the importation from these ports of the articles named in paragraph 32 of said law, and requiring special attention to be paid to the cleansing under official inspection, of linens, clothing, and bed clothes, brought from these places as the personal effects of travelers are also hereby suspended.

The provisions of section 2, paragraph 1, of the law of July 2, 1880, referring to precautionary measures against the introduction of conta-

FIG. 2.

Diagram showing the number of deaths from small-pox and the weather, during the epidemic at Catania, Italy, in the years 1887-88-89.





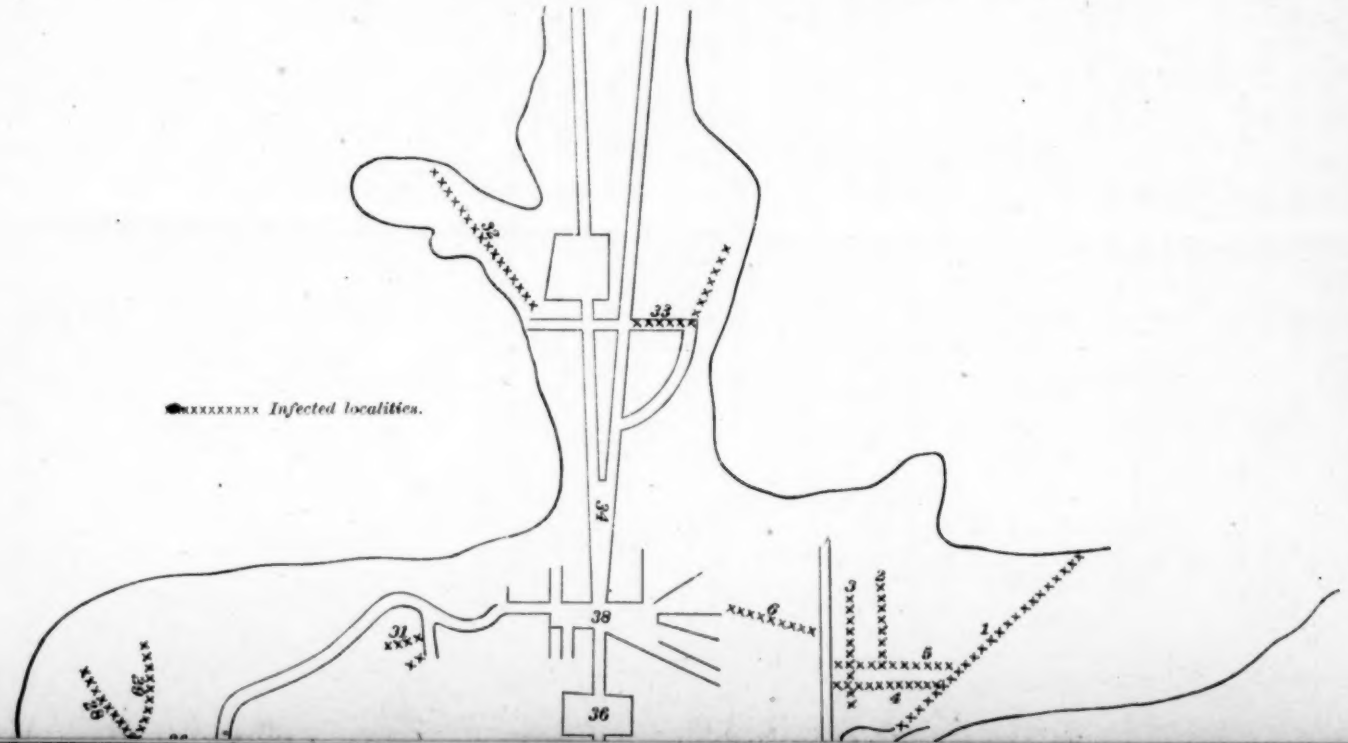
No. of Deaths.	1	0	1	6	9	9	6	18	53	77	87	120	134	168	120	61	23	3
Month.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
Year.	1887.				1888.												1889.	

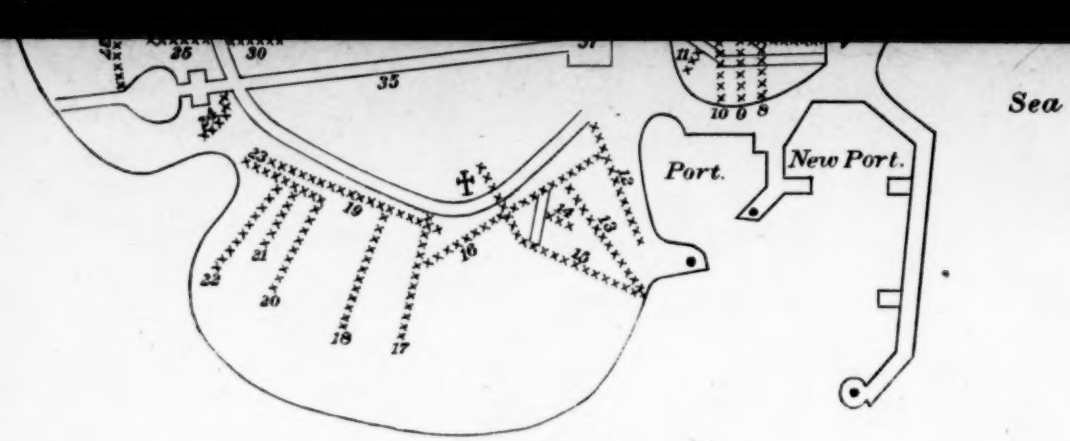
CATANIA, March 1, 1889.

VINCENT LAMANTIA,
U. S. Consul.

FIG. 1.

Map of the city of Catania, Italy, showing the infected localities during the small-pox epidemic in the years 1877-1888.




Sea
Port.
New Port.
35
30
26
10
9
8
22
21
20
19
18
17
16
15
14
13
12

gious diseases into the kingdom, are hereafter to be enforced with reference to the following places:

Marseilles; ports in Sicily; Trieste; Lisbon; all ports in Egypt; ports in Tonkin and Cochin-China; and in the East Indies, including the Dutch East Indian Colonies; ports on the Red Sea; ports in Brazil; Cuba; Hayti; Porto Rico.

The prohibition against the importation into the kingdom of used linen, used articles of clothing, and used bed-clothes, providing the articles named do not constitute the personal effects of travelers, waste cotton or wool, refuse paper, hair, and hides, remains in force with reference to the places named.

In addition thereto special attention is to be paid to the cleansing under official inspection, of linen, clothing, and bed-clothes, brought from any of the above-named places as the personal effects of travelers.

This order to go into effect at once.

ITALY—*Catania.—Small-pox epidemic of* 1887–8–9.—The United States Consul at Catania, Italy, furnishes the following diagrams concerning the small-pox epidemics which prevailed at that place during the years 1887–8–9, the first case occurring on the 25th of August, 1887. During the epidemic, out of a population of 177,165, only 12,579 were revaccinated. The consul draws the following conclusions:

First.—The mortality was at the rate of 15 per cent.

Second.—No person having previously been successfully vaccinated contracted the disease within the period of six years from that vaccination.

Third.—Out of every 100 persons, 59 were vaccinated; 41 vaccinated without result, or else vaccinated long before without effect.

The ages of the patients affected varied. In every 100, four were 20 years of age; 26 from 10 to 20; and 67 under 10 years of age.

The mortality in the regular hospitals only reached 4 per cent., while the general mortality for patients attended at the domicile, including those at hospital, was 15 per cent. There were about 6,000 persons attacked by the disease, of whom 926 died.

KEY TO MAP.

Names of infected streets.

+. First case of small-pox.
1. Via Messina.
2. " Misterbranco.
3. " Distefano.
4. " Tezzano.
5. " Platamone.
6. " Deodato.
7. " Sorrentino.
8. " Cali.
9. " Porta di Ferro.
10. " St. Gaetano.
11. " St. Tomaso.
12. " Gayometro.
13. " Grimaldi.
14. " Ortslani.
15. " Palumbo.
16. " Angelo Custode.
17. " Gramignani.
18. Via Cordai.
19. " Camastra.
20. " Belfiore.
21. " Nicatra.
22. " Testulla.
23. " Elia.
24. " Sacchero.
25. " Ferlito.
26. " Vittorio Emanuele.
27. " Stracci.
28. " Curia.
29. " Acquidotta.
30. " Pesce.
31. " Paradisa.
32. " Consolazione.
33. " Monserrato.

xxxxxxxxxxx—infected localities.

NETHERLANDS.—The deaths registered in the principal cities of the Netherlands, having an aggregate population of 1,129,678, during the month of March, 1889, corresponded to an annual rate of 25.1 a thousand. The lowest rate was recorded in Arnhem, viz., 17.5, and the highest in Hertogenbosch, viz., 39.6 a thousand. The deaths included typhus and enteric fever, 11; scarlet fever, 3; measles, 50; croup, 29; whooping-cough, 20; and diarrhœa and dysentery, 28.

CUBA—*Havana.*—Five deaths from yellow fever were registered during the week ended May 24, and four during the week ended May 31, 1889.

The United States Sanitary Inspector at Havana reports that there were 506 deaths registered in that city during the month of May, including yellow fever, 19; so-called pernicious fever, 30; remittent fever, 1; enteric fever, 10; small-pox, 1; diphtheria and croup, 4; and glanders, 2.

"Up to the present time, diphtheria has shown no very marked tendency to spread this season, but small-pox in some interior towns, as Corrales Falso, in the province of Matanzas, is an active epidemic."

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	May 18	5,642,015	1,509	.....	.....	.....	.....	7	11	27	61	.....
Paris	May 18	2,260,945	921	.....	.....	2	.....	12	6	42	17	6
Glasgow	May 18	545,678	253	.....	.....	.....	.....	3	4	3	.....	.....
Warsaw	May 11	445,770	214	.....	.....	4	.....	.....	.....	4	.....	.....
Calcutta	Apr. 13	433,219	172	20	.....	4	.....	.....	.....	.....	1	.....
Calcutta	Apr. 20	433,219	187	14	.....	6	.....	.....	.....	.....	2	.....
Amsterdam	May 25	399,051	192	.....	.....	.....	.....	1	.....	4	.....	.....
Copenhagen	May 11	307,000	135	.....	.....	.....	.....	.....	1	7	.....	.....
Munich	Apr. 27	281,000	202	.....	.....	.....	.....	1	4	14	.....	.....
Munich	May 4	281,000	162	.....	.....	.....	.....	.....	2	2	.....	.....
Munich	May 11	281,000	185	.....	.....	.....	.....	.....	4	6	.....	.....
Edinburgh	Apr. 27	266,900	66	.....	.....	.....	1	.....	.....	.....	.....	.....
Palermo	May 18	250,000	84	.....	.....	.....	.....	.....	3	2	.....	.....
Belfast	May 18	229,622	97	.....	.....	.....	.....	4	.....	.....	.....	.....
Rotterdam	May 15	197,724	99	.....	.....	.....	.....	.....	.....	.....	11	.....
Genoa	May 18	179,941	92	.....	.....	1	.....	.....	.....	2	.....	.....
Toronto	May 17	175,000	21	.....	.....	.....	.....	.....	.....	1	.....	.....
Toronto	May 24	175,000	40	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trieste	May 11	154,500	69	.....	.....	.....	.....	1	.....	1	.....	.....
Stuttgart	May 18	125,510	59	.....	.....	.....	.....	.....	2	2	.....	.....
Barmen	May 18	109,000	43	.....	.....	.....	.....	.....	.....	1	4	.....
Leghorn	May 19	102,893	41	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	Apr. 27	76,400	23	.....	.....	.....	.....	1	1	.....	.....	.....
Mayence	May 4	65,802	30	.....	.....	.....	.....	.....	.....	1	.....	.....
Mayence	May 11	65,802	41	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	May 18	65,028	49	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	May 3	47,448	61	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	May 10	47,448	76	.....	.....	.....	.....	1	.....	.....	.....	.....
Vera Cruz	May 23	23,800	25	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	May 24	17,300	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nassau, N. P	May 25	12,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	May 6	1,020	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

DELAWARE BREAKWATER QUARANTINE STATION.—The following telegram has been received from Acting-Assistant Surgeon Wm. P. Orr:

"*June* 6, 1889: British steamer "Baltimore City," from Havana, via Santiago de Cuba, for Philadelphia, arrived at this station this morning with two suspicious cases on board. They will be admitted to hospital, and steamer detained for observation."

PENNSYLVANIA—*Johnstown.*—Owing to the bursting of a reservoir, from floods caused by recent heavy rains, this town was destroyed on Friday evening, May 31, 1889. Passed-Assistant Surgeon P. M. Carrington, in charge of the Marine-Hospital Service at Pittsburgh, Pa., was ordered to go to Johnstown and aid the State board of health, if necessary, and report the condition of the place. The following telegrams have been received from Johnstown:

June 4: Arrived six P. M. Large portion of town in ruins. Many bodies of men and animals yet among debris. Dead horses being buried, and human bodies recovered, embalmed, and buried as rapidly as possible. Considerable sickness from exposure to wet and cold. Greatest danger to public health feared from overcrowding and filth in inhabitable part of town. Sanitary meeting to-morrow morning, when I will eport further.

CARRINGTON,
Passed-Assistant Surgeon Marine-Hospital Service.

June 4: Accept thanks for your timely offer. The immediate need is for crude disinfectants. Will retain Surgeon Carrington for a few days.

BENJAMIN LEE,
Secretary State Board of Health.

June 5: Have conferred with Doctor Lee and looked situation over. There is danger of sickness unless active sanitary measures are taken. Corps now being organized. Dead animals are being buried as rapidly as possible and disinfectants used freely. The work will require considerable time.

CARRINGTON.

June 5: The situation here is very serious. A large sanitary corps will be needed, with Carrington to remain as long as his services are needed. Make arrangements for at least a month.

BENJAMIN LEE.

June 5: Yours received. Thanks. Ship everything by Baltimore and Ohio Railroad. Temporary depopulation is being urged. Carrington is very useful.

BENJAMIN LEE.

June 7: Dr. Lee has established his head-quarters in Pittsburgh, leaving Doctors Groff and Sibbett in charge here. I am inspecting morgues to-day. Dr. Groff thinks I may return to Pittsburgh to-night. Weather continues cool. Sanitary work progressing favorably.

CARRINGTON.

FLORIDA—*Pensacola.*—Month of *May*, 1889. Estimated population, 15,000. Total deaths, 21, including whooping-cough, 1; erysipelas, 1; enteric fever, 1; and dysentery, 1.

IOWA—*Keokuk.*—Month of *May*, 1889. Population, 16,000. Total deaths, 22, including diphtheria, 1; and measles, 7.

MICHIGAN.—Reports to the State board of health, Lansing, by 56 observers, indicate that for the week ended May 25, 1889, rheumatism increased, and pneumonia and typho malarial fever decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week ended May 25, and since, at five places; scarlet fever at thirteen places; enteric fever at two places; measles at nine places; small-pox at two places; one case at Battle Creek, and one in hospital at Detroit.

VIRGINIA—*Petersburg.*—Month of *May*, 1889. Population, 22,000. Total deaths, 37, including phthisis pulmonalis, 10; congestive chills, 1.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	June 1	1,567,812	629	.....	.....	.....	.....	.....	.....	2	28	30	5	15
Brooklyn, N. Y.	June 1	821,525	335	.....	.....	.....	.....	.....	.....	1	7	25	7	7
Baltimore, Md	June 1	500,343	136	.....	.....	.....	.....	.....	.....	2	.....	3	.....	1
Cincinnati, Ohio	June 1	325,000	106	.....	.....	.....	.....	.....	.....	1	.....	5	2	1
New Orleans, La	May 25	254,000	169	.....	.....	.....	.....	.....	.....	2	.....	.....	2	.....
Cleveland, Ohio	May 4	235,000	67	.....	.....	.....	.....	.....	.....	5	3	.....	.....	.....
Cleveland, Ohio	May 11	235,000	75	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....
Detroit, Mich	May 25	230,000	50	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Washington, D. C.	June 1	225,000	84	.....	.....	.....	.....	.....	.....	3	1	1	.....	1
Milwaukee, Wis.	June 1	210,500	50	.....	.....	.....	.....	.....	.....	.....	3	1	.....	.....
Rochester, N. Y.	May 25	130,000	34	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2
Providence, R. I.	June 1	127,000	41	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Richmond, Va.	June 1	100,000	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Denver, Colo.	May 31	100,000	30	.....	.....	1	.....	.....	.....	.....	.....	4	.....	.....
Toledo, Ohio	May 31	83,500	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn.	June 1	65,153	14	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Fall River, Mass.	June 1	65,000	22	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Lynn, Mass	June 1	50,000	14	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Portland, Me.	June 1	42,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	May 17	40,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa	June 1	33,715	8	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Binghamton, N. Y.	June 1	30,000	7	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Altoona, Pa	May 25	30,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	June 1	26,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	June 1	25,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	May 23	22,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	May 30	22,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	June 1	21,353	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa	June 1	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Pensacola, Fla.	May 25	15,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 24. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., June 14, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended June* 14, 1889, *and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended May 25, corresponded to an annual rate of 17.4 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Leicester, viz., 12.1, and the highest in Preston, viz., 30.5 a thousand. Diphtheria caused 4 deaths in Salford, 5 in Birmingham, and 2 in Manchester.

London.—One thousand two hundred and sixty-seven deaths were registered during the week, including measles, 47; scarlet fever, 16; diphtheria, 21; whooping-cough, 48; enteric fever, 5; diarrhœa and dysentery, 13. The deaths from all causes corresponded to an annual rate of 15.2 a thousand. Diseases of the respiratory organs caused 177 deaths. In greater London 1,590 deaths were registered, corresponding to an annual rate of 14.7 a thousand of the population. In the "outer ring" the deaths included measles, 15; whooping-cough, 9; scarlet fever, 4; and diphtheria, 4.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended May 25, in the 16 principal town districts of Ireland, was 19.9 a thousand of the population. The lowest rate was recorded in Wexford, viz., 4.3, and the highest in Drogheda, viz., 46.5 a thousand. In Dublin 197 deaths were registered, including measles, 1; whooping-cough, 2; enteric fever, 2; and erysipelas, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended May 25, corresponded to an annual rate of 22.3 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Dundee, viz., 15.9, and the highest in Glasgow, viz., 28.6 a thousand. The aggregate number of deaths registered from all

causes was 571, including measles, 34; scarlet fever, 8; diphtheria, 8; whooping-cough, 53; fever, 4; and diarrhœa, 10.

Calcutta.—Eight hundred and fifty-three deaths were registered during the month of February, 1889, in a population of 433,219, showing an annual ratio of 23.6 a thousand. The proportion of male to female deaths was as 157 to 100. The monthly total is less than all the corresponding figures of the past ten years, excepting 1886. There were 94 deaths from cholera, against 154 in the preceding month. The deaths included small-pox, 6; fevers, 210; and bowel complaints, 84.

VENEZUELA.—The United States legation at Caracas furnishes the following table of vital statistics:

Vital statistics of Venezuela for the calendar year ended December 1887.

[From Report of Minister of Yomento for 1889, pp. 39, 40, and 41.]

	BIRTHS.							DEATHS.			
	Legitimate.			Illegitimate.							
	Males.	Females.	Total.	Males.	Females.	Total.	Aggregate.	Males.	Females.	Total.	Marriages.
Federal district	669	603	1,272	640	682	1,322	2,594	979	1,017	1,996	307
States of Guzman Blanco	3,201	3,075	6,276	5,012	5,039	10,051	16,327	5,523	5,561	11,084	3,440
Carabobo	1,184	1,122	2,306	2,510	2,428	4,938	7,244	2,421	2,085	4,506	709
Bermúdez	1,401	1,389	2,790	2,691	2,770	5,461	8,251	2,623	2,633	5,256	605
Bolivar	262	288	550	617	615	1,232	1,782	558	496	1,054	187
Zamora	1,335	1,297	2,632	2,334	2,434	4,768	7,400	3,156	3,207	6,363	761
Lara	1,909	1,948	3,857	4,125	3,716	7,841	11,698	2,678	2,723	5,401	516
Falcón	1,438	1,279	2,717	1,904	1,807	3,711	6,428	2,794	2,604	5,397	646
Los Andes	3,410	3,152	6,562	3,118	2,999	6,117	12,679	4,127	3,835	7,962	1,259
Territories	250	242	492	487	383	870	1,362	346	237	583	184
Totals	15,059	14,395	29,454	23,438	22,873	46,311	75,765	25,205	24,397	49,602	8,614

BRAZIL—*Pernambuco.*—Eleven deaths from yellow fever and 1 from small-pox were registered during the month of April, 1889.

Maceio.—Three hundred and one deaths were registered during the month of April, 1889, in a population of 17,000. There were 407 cases of small-pox during the month, and 257 deaths from that disease. The United States consul states that the sanitary condition of the city is at present very bad.

WEST INDIES—*Barbadoes, May* 20, 1889.—Health of island good. No prevailing diseases.

CUBA—*Cardenas, May* 30, 1889.—The rains have set in, and will continue through the summer almost daily. Good health in town and bay.

Havana.—Ten deaths from yellow fever were registered during the week ended June 7, 1889.

MEXICO—*Vera Cruz.*—The United States consul states, under date of May 30, 1889: "The health of this place is generally good. There is no yellow fever here yet."

Guaymas.—Sixteen deaths were registered during the month of May, 1889. No particular or epidemic sickness. Sanitary condition good.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	May 25	5,642,015	1,590	.....	.....	.....	.....	5	20	25	62	.....
Paris	May 25	2,260,945	1,015	.....	.....	3	.....	10	6	43	23	5
Glasgow	May 25	545,678	291	.....	.....	.....	.....	1	6	5	.....	.....
Warsaw	May 18	445,770	218	.....	.....	.....	.....	.....	1	3	.....	.....
Calcutta	Apr. 27	433,219	232	35	.....	2	.....	.....	.....	1	.....	.....
Rome	Apr. 13	404,449	180	.....	.....	4	.....	2	.....	11	.....	.....
Rome	Apr. 20	404,449	176	.....	.....	5	.....	2	.....	7	.....	.....
Amsterdam	May 25	399,051	192	.....	.....	.....	.....	1	.....	4	.....	.....
Copenhagen	May 18	309,000	119	.....	.....	.....	.....	1	.....	8	.....	.....
Edinburgh	May 4	266,900	90	.....	.....	.....	.....	.....	.....	2	.....	.....
Edinburgh	May 11	266,900	90	.....	.....	.....	1	2	.....	2	.....	.....
Palermo	May 25	250,000	75	.....	.....	1	.....	.....	1	2	.....	.....
Belfast	May 25	229,622	95	.....	.....	.....	.....	3	.....	.....	.....	.....
Bristol	May 25	229,361	73	.....	.....	.....	.....	.....	2	.....	.....	.....
Rotterdam	May 25	197,724	92	.....	.....	.....	.....	.....	.....	.....	2	.....
Toronto	June 8	175,000	101	.....	.....	.....	.....	1	.....	1	.....	.....
Trieste	May 18	154,500	71	.....	.....	.....	.....	.....	.....	1	.....	.....
Stuttgart	May 25	125,510	45	.....	.....	.....	.....	.....	3	2	.....	.....
Pernambuco	Apr. 30	120,000	90	.....	3	.....	.....	2	1	.....	.....	.....
Pernambuco	May 7	120,000	114	.....	.....	.....	3	3	2	.....	.....	.....
Pernambuco	May 14	120,000	67	.....	.....	.....	.....	.....	1	.....	.....	.....
Barmen	May 25	109,000	40	.....	.....	.....	1	.....	.....	1	6	.....
Havre	May 25	112,074	42	.....	.....	1	.....	.....	.....	1	.....	.....
Leghorn	May 26	102,893	26	.....	.....	.....	.....	.....	.....	2	.....	.....
Leith	May 4	76,400	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	May 11	76,400	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	May 25	65,028	39	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	May 17	47,448	49	.....	.....	.....	.....	1	.....	.....	.....	.....
Merida	May 24	47,448	62	.....	.....	.....	1	.....	.....	.....	.....	.....
Vera Cruz	May 30	23,800	27	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	May 19	23,631	11	.....	.....	.....	.....	.....	.....	1	.....	.....
Kingston, Can	June 7	17,300	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Apr. 26	13,500	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	May 3	13,500	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	May 10	13,500	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	May 17	13,500	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	May 18	13,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Jaun del Norte	Apr. 29	1,004	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	May 6	1,020	0	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

Report upon the disaster at Johnstown, Pa.

WASHINGTON, *June* 9, 1889.

To the President:

SIR: I have the honor to report for your information that I visited Johnstown, Pa., according to your verbal instructions, leaving this city at 10 p. m. on Thursday last. I arrived at Johnstown on Friday at 2:30 p. m.

On arriving I immediately visited the "headquarters" building, where I found Dr. Groff and Dr. Sibbett, of the Pennsylvania State

board of health, and a miscellaneous mob of people in the building, most of whom were engaged in some sort of work connected with relief measures. Finding that there was nothing for me to do at that office I started out on a tour of inspection of the place. After some difficulty I pushed my way through the crowd to the desk of a Mr. Scott, who has assumed the powers of a dictator, and procured a pass to enable me to go through the guard lines.

The newspaper statements of the devastation are correct in the main. The disaster occurred on the 31st of May, at about 3 p. m. The business portion of the city of Johnstown occupied the area between the large stream known as Stony Creek and the small stream known as Conemaugh River, and is a triangular area of ground, having for its two sides the rivers aforesaid and for its base a high hill, at the base of which there is a fringe of wooden houses yet untouched by the flood. This main triangle is joined by a triangle on one side, the apex extending up the Conemaugh valley, and on the other by one extending up Stony Creek. The Pennsylvania Railroad entered by the Conemaugh, and the Baltimore and Ohio by the Stony Creek valley. These subtriangular spaces are included in the general devastation. Scarcely a vestige of the plan of streets remained on Friday, except that Main street had been cleared in its center by gangs of men employed by Messrs. Booth & Flinn, contractors of Pittsburgh, but by Saturday morning there were several streets passable. Curb-stones were visible in a few places on this vast area and here and there a house, store, or other public building was standing in ruins to give a landmark to the workmen.

It is estimated that about 3,000 men are engaged in the work of removal of the debris. The debris consists of saw-logs, house-timbers, wreckage of furniture, floors, roofs, and wooden side-walls, with acres of splintered and crushed wood. Among the debris are found the remains of persons drowned, or killed by the falling timbers, and dead animals of all kinds. The work of clearing up the surface debris is going on well, and in my judgment ten days more of the same systematic work will suffice to clear the surface of the main portion of the late city, but the debris of the Conemaugh valley proper and that of the Stony Creek valley has yet only been touched by the gangs of laborers of the two railroads, where their respective tracks have been partially cleaned.

The Pennsylvania railroad had a stone arch-bridge across the Conemaugh just below the junction of the two streams, and at this bridge there is an area of drift of about 12 acres. This drift consists of saw-logs, locomotives, iron boilers, wire from the wire works, debris from wrecked buildings, and dead bodies of human beings and animals. A strong stench was plainly perceptible at this point, and but little success had been met with in the attempt to clear it out. Many charges of dynamite have been exploded in the vain attempt, and in my judgment nothing but the most persistent effort will remove the drift, and the efforts should be intelligently directed; grapple irons and tackle, such as are used on the United States snag-boats, are necessary, and the work should be directed by some one familiar with that class of work. Adjutant-General Hastings, of the Pennsylvania National Guard, on Saturday employed Messrs. Coburn & Co., of Altoona, with 150 men, to work at this drift, with picks and hand grappling-irons. The General says that 3,000 men could be employed at this work. Mr. Coburn in-

formed me that at the same rate of progress as that made on Saturday he thought the drift could be removed in ten days. Through the generosity of Altoona this force is paid by that city, but it is apparent that the force is inadequate, and their work would be more intelligently directed if an officer of the engineer corps of the Army were instructed to advise with General Hastings as consulting engineer. This suggestion I had the honor of making to you by telegraph.

On Saturday the medical relief work was divided into ten districts by the board of health and ten local physicians placed in charge of them. There is a large beer hall converted into a hospital, which is in charge of a physician from Pittsburgh. To this hospital all the wounded are brought by the police and the different attendants.

The sick and wounded are now mainly confined to those persons working as laborers, and in the various relief organizations outside of the laborers there are few citizens left. Many are lost and many gone away from the scene of their great calamity. There are some twenty physicians, ten of whom are able to work, but no more are needed, and it would be a great relief if many of those from a distance would go away.

For a time there was great confusion in the issue of supplies of clothing and food, but on Thursday that portion of the work was turned over to the commissary-general, Colonel Leach, accompanying General Hastings' command, and system has taken the place of chaotic condition. All supplies intended for the sufferers should be sent to the care of General Hastings, and clothing supplies are believed to be now no longer necessary.

Fifty dozen pairs of rubber gloves for the use of the persons handling dead bodies would be a welcome present to the workmen clearing up the debris, especially for those at the bridge drift.

There are many private organizations having tents and temporary sheds, each working on its own plan. Some public-spirited towns, having sent relief supplies, send along a corps to attend to their issue. This is no longer necessary, and this plan reminds one of the country donation parties, where the good people of the parish, having resolved to send in a lot of good things to their minister, go along and eat them up in a single evening. It is safe to say that the relief work would be much better done by the national guard under the intelligent command of General Hastings than in any other way. The Red Cross association have a hospital above the town in the Stony Creek valley, and on Saturday started one at Kernville. At the latter place, there being no other hospital, the Red Cross hospital may be of some service. The first location served a good purpose at first, but when the regular hospital was started the patients were few that found their way up the long distance to Stony Creek valley.

Kernville is now accessible by means of the pontoon bridges placed by Captain Sears, of the engineer corps of the Army. That village is immediately opposite the area lately occupied by the business portion of Johnstown, and shared in the general wreck. Although many of the buildings are still standing, they are badly wrecked, and the question of applying the torch to them was being considered.

The government of the place is at present rather a peculiar one. No semblance of municipal government remains, and a citizen of Pittsburgh, by the name of Scott, has by consent, more or less general, assumed the functions of dictator.

The national guard were not given control of any part of the duty at first, as it seems would have been natural, at a time when all civil government was overthrown, and the able, active, and efficient General Hastings and his command are simply acting as a guard to the ruins, with the exceptions above noted. As a painful evidence of the lack of concentrated control in this form of government, it is to be noted that Mr. Scott has constituted fifteen committees, some of whom are now *functus officio*, and others have been superseded.

The committees were as follows:

1. Committee on local distribution of supplies (five men).
2. Committee on teams and messengers.
3. Committee on information and transportation (two men).
4. Committee on commissary (superseded by Colonel Leach).
5. Committee on removal of dead animals (one man).
6. Committee on morgues (two clergymen; now under State board of health).
7. Committee on removal of *debris*.
8. Committee on time-keeping and books.
9. Committee on dangerous buildings.
10. Committee on police (this committee consists of Captain Gageby, U. S. A., and is well managed).
11. Fire department (a Pittsburgh fire company is doing this service).
12. Committee on employment.
13. Sanitary committee.
14. Committee on registration.
15. Committee on valuables.

Nearly all of the above work being under the direction of persons totally unfamiliar with the work, much valuable time was lost in the training of the committeemen for the performance of duties that, even now, could be much better done under the military system.

The water supply of Johnstown is from Stony Creek, some miles above the scene of the disaster, and is pure, wholesome water. There is little danger of an epidemic among the inhabitants of Johnstown. The fringe of dwellings at the base of the mountain are somewhat overcrowded, and General Hastings has directed the pitching of hospital tents, and will invite such of the people as choose to occupy them to do so. The State board of health are on the spot, and watching with care the progress of the work. They have general charge of the morgues and keep them thoroughly disinfected, and, as already stated, they now employ ten district inspectors. The danger point, from a sanitary point of view, is the drift at the bridge, and this danger is not to the inhabitants of Johnstown, but to those people depending on the lower river for their water supply. This water, if boiled before drinking, will not be unhealthy, but the thought of drinking water contaminated by dead bodies of human beings and animals is revolting. The clearing up of this drift, while attended with great difficulty, will be accomplished.

The published statement that animals are allowed to float down the river from this drift is positively untrue. All animals and human bodies are taken out as soon as loosened, the bodies taken to the morgue, and the animals burned on the shore. In the town the same course is pursued, as all dead animals are burned with the *debris*, and there are probably a hundred fires from such piles now burning in Johnstown. The drift pack cannot now be well burned, and if it could it would only

be to the water-soaked portion, and this would not release the bodies. I saw one portion of a body of a woman, taken from this drift, at one of the morgues, in which all the upper part of the body had been burned, the pelvis and limbs, having been in the water at the time of the fire, were not burned. As it is the portion in the water that, by its decomposition, is likely to contaminate it, it is evident that burning the drift would be of little avail. Besides that, many of these bodies are believed to be held down by masses of iron, and, therefore, could not be reached by firing the drift. There is no use whatever in attempting to disinfect this drift, and the only way to cure the evil is its removal.

In conclusion, I have to say this report is confined to the portion covered by Johnstown proper. No attempts has been made to touch upon the general condition of the outlying villages, which also suffered from the calamity.

I have not spoken of the work of rebuilding; it will occupy months to get the cellars cleared so that it may be begun; nor have I given any statements of individual suffering; but the charitable people of this country ought not to cease their contribution of money for some weeks to come.

Finally, I may say that there is no danger whatever of a general epidemic."

Since writing the foregoing the military have been placed in temporary control.

DELAWARE BREAKWATER QUARANTINE STATION, *June* 10, 1889.—Acting-Assistant Surgeon Wm. P. Orr reports that "the British steamer "Baltimore City," from Havana via Santiago de Cuba, for Philadelphia, arrived at this quarantine station yesterday with two cases of yellow fever on board. The sick were brought on shore yesterday to hospital, and are doing well. The steamer will be disinfected."

FLORIDA—*Jacksonville, June* 10, 1889.—Mortuary report of city of Jacksonville for the month of May, 1889: "Abscess of liver, 2; accidental death, 3; bronchitis, 1; consumption, 7; consumption of bowels, 1; cholera infantum, 3; convulsions, 3; dropsy, 2; diarrhœa, 4; dentition, 3; dysentery, 1; enterites, 2; erysipelas, 1; puerperal fever, 1; typhoid fever, 2; typho-malarial fever, 2; remittent fever, 1; gastritis, 2; disease of heart, 2; congestion of lungs, 1; marasmus, 5; meningitis, 1; nephritis, 3; pneumonia, 2; pleuro-pneumonia, 1; premature birth, 1; pertussis, 3; senility, 2; tumor of abdomen, 1; unknown, 1; uræmia, 1; worms, 1.—Total, 66. Whites, 28; colored, 38; males, 23; females, 43; under 1 year, 23; over 1 year and under 10 years, 6. Twelve children under 1 year died without medical attendance, the parents offering as an excuse that they had no idea that the children were sick enough to require advice of doctor. The unusual mortality for the month may be attributed to the long spell of dry weather, and the marked range of temperature between night and day."

CONNECTICUT—*New Haven.*—Month of May, 1889. Total deaths, 108, including scarlet fever, 1; enteric fever, 1; whooping-cough, 2; diphtheria and croup, 2; and diarrhœal diseases, 2.

COLORADO—*Denver.*—Month of May, 1889. Population, 100,000. Total deaths, 141, including croup, 2; dysentery, 2; diphtheria, 10; erysipelas, 1; enteric fever, 4; measles, 1; scarlatina, 1; and small-pox, 1.

ILLINOIS—*Chicago.*—Month of May, 1889. Population, 830,000. Total deaths, 1,240, including croup, 31; diarrhœa, 5; dysentery, 2; diphtheria, 70; erysipelas, 9; scarlet fever, 15; enteric fever, 16; measles, 33; small-pox, 1; whooping-cough, 6; and varicella, 1.

IOWA—*Keokuk.*—Month of May, 1889. Population, 16,000. Total deaths, 22, including diphtheria, 1; and measles, 7.

Dubuque.—Month of May, 1889. Population, 35,000. Total deaths, 28, including measles, 1.

Davenport.—Month of May, 1889. Population, 33,715. Total deaths, 30, including croup, 1; and diphtheria, 1.

KENTUCKY—*Louisville.*—Month of May, 1889. Population, 227,000. Total deaths, 253, including croup, 1: diphtheria, 3; dysentery, 2; enteric fever, 4; measles, 10; and whooping-cough, 5.

MASSACHUSETTS—*Newton.*—Month of April, 1889. Population, 21,553. Total deaths, 20, including diphtheria, 3; and enteric fever, 1.

Fall River.—Month of May, 1889. Population, 65,000. Total deaths, 93, including scarlet fever, 7; diphtheria, 2; and enteric fever, 1.

MICHIGAN.—Reports to the State board of health, Lansing, from fifty-three observers, indicate that for the month of May, 1889, diarrhœa and inflammation of kidneys increased, and influenza, remittent fever, pneumonia, erysipelas, and pleuritis decreased in prevalence.

Reports from fifty-three observers during the week ended June 1, indicate that influenza and consumption increased, and rheumatism and measles decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week, and since, at eleven places; scarlet fever at thirteen places; enteric fever at four places; measles at six places; and small-pox at two places—one case in hospital at Detroit and one at Battle Creek.

Grand Rapids.—Month of May, 1889. Population, 70,000. Total deaths, 43, including measles, 1.

MISSOURI—*St. Louis.*—Month of May, 1889. Population, 440,000. Total deaths, 600, including measles, 1; scarlatina, 9; diphtheria, 33; croup, 7; whooping-cough, 5; enteric fever, 5; diarrhœal diseases, 19; and erysipelas, 5.

NEW YORK—*Rochester.*—Month of May, 1889. Population, 130,000. Total deaths, 150, including croup, 4; diarrhœa, 1; diphtheria, 3; and whooping-cough, 3.

TEXAS—*San Antonio.*—Month of May, 1889. Population, 50,000. Total deaths, 95, including diphtheria, 1; diarrhœa, 3; dysentery, 5; enteric fever, 2; and measles, 2.

VIRGINIA—*Lynchburg.*—Month of May, 1889. Total deaths, 27, including croup, 1; and dysentery, 1.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	June 8	1,568,684	688	.....	.....	.....	.....	.....	.....	4	26	41	10	11
Philadelphia, Pa.	June 8	1,040,245	386	.....	.....	.....	.....	.....	.....	14	2	6	5	7
Chicago, Ill	June 8	830,000	229	.....	.....	.....	.....	.....	.....	3	2	27	3	1
Brooklyn, N. Y.	June 8	821,525	322	.....	.....	.....	.....	.....	.....	1	8	16	2	4
Baltimore, Md	June 8	500,343	134	.....	.....	.....	.....	.....	.....	3	6	2	.....	1
San Francisco, Cal.	May 31	330,000	97	.....	.....	.....	.....	.....	.....	4	.....	1	.....	.....
Cincinnati, Ohio	June 8	325,000	117	.....	.....	.....	.....	.....	.....	2	.....	12	4	.....
Detroit, Mich	June 1	230,000	57	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Washington, D. C.	June 8	225,000	94	.....	.....	.....	.....	.....	.....	2	2	3	.....	.....
Milwaukee, Wis.	June 8	210,000	65	.....	.....	.....	.....	.....	.....	1	2	3	.....	.....
Minneapolis, Minn.	June 1	200,000	34	.....	.....	.....	.....	.....	.....	1	2	3	.....	1
Minneapolis, Minn.	June 8	200,000	43	.....	.....	.....	.....	.....	.....	2	1	2	.....	.....
Newark, N. J.	June 4	183,563	87	.....	.....	.....	.....	.....	.....	1	2	7	1	2
Kansas City, Mo.	June 1	180,000	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rochester, N. Y.	June 8	130,000	22	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Providence, R. I.	June 8	127,000	42	.....	.....	.....	.....	.....	.....	.....	.....	2	1	2
Denver, Colo.	June 7	100,000	32	.....	.....	1	.....	.....	.....	.....	.....	2	.....	.....
Richmond, Va.	June 8	100,000	31	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Toledo, Ohio	June 7	83,500	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn.	June 8	65,153	20	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Fall River, Mass.	June 8	65,000	18	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Charleston, S. C.	June 1	60,145	43	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Charleston, S. C.	June 8	60,145	41	.....	.....	.....	.....	.....	.....	2	.....	.....	2	.....
Lynn, Mass	June 8	50,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	June 8	42,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	June 8	42,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	May 24	40,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa.	June 1	35,000	4	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Council Bluffs, Iowa.	June 8	35,000	5	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Davenport, Iowa.	June 8	33,715	9	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Altoona, Pa	June 1	30,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	June 8	30,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	June 8	30,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	June 8	26,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	June 8	25,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	June 6	22,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa.	June 8	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	June 1	15,000	8	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Pensacola, Fla.	June 8	15,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 25. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE.
Washington, D. C., June 21, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended June* 21, 1889, *and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended June 1, corresponded to an annual rate of 16.5 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Bradford, viz., 12.7, and the highest in Preston, viz., 38.6 a thousand. Diphtheria caused 4 deaths in Portsmouth, and 3 in Newcastle-upon-Tyne.

London.—One thousand one hundred and fifty-one deaths were registered during the week, including measles, 31; scarlet fever, 4; diphtheria, 16; whooping-cough, 49; enteric fever, 9; diarrhœa and dysentery, 14. The deaths from all causes corresponded to an annual rate of 13.8 a thousand. Diseases of the respiratory organs caused 162 deaths. In greater London 1,443 deaths were registered, corresponding to an annual rate of 13.3 a thousand of the population. In the "outer ring" the deaths included measles, 8, and whooping-cough, 10.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended June 1, in the 16 principal town districts of Ireland, was 21.5 a thousand of the population. The lowest rate was recorded in Sligo, viz., 9.6, and the highest in Lurgan, viz., 35.9 a thousand. In Dublin 123 deaths were registered, including measles, 3, and enteric fever, 5.

Scotland.—The deaths registered in 8 principal towns during the week ended June 1, corresponded to an annual rate of 21.3 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Edinburgh, viz., 14.8, and the highest in Glasgow, viz., 25.4 a thousand. The aggregate number of deaths registered from all

causes was 545, including measles, 20; scarlet fever, 3; diphtheria, 10; whooping-cough, 33; fever, 4, and diarrhœa, 15.

BRAZIL—*Rio Janeiro.*—Week ended April 21, 1889. Population, 300,000. Total deaths, 393, including yellow fever, 17; small-pox, 1; typhus, 9, and enteric fever, 5. The prevailing diseases are pulmonary affections and fevers.

Week ended April 28, 1889. Total deaths, 390, including yellow fever, 19; small-pox, 1; typhus, 11, and enteric fever, 6.

Week ended May 5, 1889. Total deaths, 429, including yellow fever, 12; small-pox, 2; typhus, 7; enteric fever, 5, and diphtheria, 1.

Week ended May 12, 1889. Total deaths, 435, including yellow fever, 14; small-pox, 1; typhus, 7; enteric fever, 3, and diphtheria, 2.

Bahia.—The United States consul, in his dispatch dated May 11, 1889, says:

I have the honor to report the condition of this city about the same as stated in my dispatch dated April 12. Vessels from the south with sickness on board are still quarantined; all others are fumigated. Very little yellow fever at Rio de Janeiro and Santos, according to latest reports. At Campinas, however, latest advices state it is raging with greater violence than at any time since its outbreak. Drought has visited this city and province again. No rain since 16th ultimo, contrary to what is expected at this season. The weather, too, is unusually warm.

Pernambuco.—The United States consul, in his dispatch dated May 15, 1889, says:

I have the honor to inform the Department that small-pox continues to prevail to an alarming extent in Maceio and vicinity. Mr. Legenes, consular agent at Maceio, informs me that statistics are difficult to obtain, and the local authorities suppress the fact of the actual number of deaths by this epidemic as much as possible. Not nearly as many are reported as have actually died by this plague.

Ceara.—Three hundred and fifteen deaths were registered during the month of April, 1889. No deaths from contagious diseases. Sanitary condition of city good.

PHILIPPINE ISLANDS.—The steamship City of Sydney arrived at San Francisco June 12, with Hong Kong dates to May 19. The San Francisco *Morning Call* of June 13 publishes the following:

In Manila and suburbs, from the 6th to the 7th inst., 42 deaths from cholera were reported, and from the 8th to the 9th 24. From the 26th of April to the 6th of May there were 307 cases in the province of Tarlac, of which 185 proved fatal; 311 cases in the province of Nueva Ecifa, with 290 deaths, and 310 deaths in the city and suburbs of Manila. Of 122 cases which occurred in this district of Morong, 100 proved fatal. The British consul has conveyed to the Governor-General of the Philippines the instructions he has received from the Gov-

ernor of Hong-Kong to the effect that vessels proceeding from the Philippines to this port are to hoist the yellow flag. An order has been issued at Manila providing for the examination of ships entering the river Pasig.

CUBA—*Santiago de Cuba.*—The United States consul writes as follows under date of June 7, 1889:

The alcalde municipal or mayor has some days since officially declared the existence of small-pox in the city. I have just had a conference with the president of the board of health, who is also physician of the port, and he tells me that this declaration is the result of a misinterpretation of an official communication to the mayor by the board of health. That isolated cases of small-pox among the negro population in the outskirts of the town exist, as every year at this period, is not to be denied; however, not in a manner to endanger shipping or warrant me to give unclean bills of health to vessels leaving here for the United States. However, should cases occur in the city proper, which is most unlikely, I will immediately report the matter, and would request you to instruct boarding officers at Federal and State quarantines at Baltimore, Philadelphia, and New York, and also at Delaware Breakwater, to be very cautious with vessels coming from here.

In his official communication to me the president of the board of health says (translated): "The moist heat of the second week in May and copious rains have developed again paludic and catarrhal fevers, which are the prevailing diseases. Some cases of varioloid are registered. The death-rate is insignificant, and its greater portion in the infantile part of the population. The public health is excellent; predominant are diseases common to this season of year."

There is not one single case of yellow fever registered in the town. The one death of small-pox was a negro boy eight years of age. I should be most happy to receive your instructions regarding the issuing of bills of health. In my judgment, it would be most injudicious to take heed of the declaration of the alcalde municipal.

Cardenas, June 6, 1889.—Weather warm and rainy; health of town and port good.

NEW PROVIDENCE—*Nassau, June* 8, 1889.—City very healthy.

MEXICO—*Vera Cruz, June* 6, 1889.—The United States consul states: "There is no fever here yet."

TASMANIA—*Hobart.*—Month of March, 1889. Population, 34,485. Total deaths, 71, including enteric fever, 7.

DUTCH GUIANA—*Paramaribo.*—Month of April, 1889. Population, 27,683. Total deaths, 65, including "malignant fever," 2.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	June 1	5,642,015	1,443	.....	.....	.....	.....	9	6	17	39	.....
Paris	June 1	2,260,945	884	.....	.....	3	.....	17	9	33	13	7
Glasgow	June 1	545,678	258	.....	.....	.....	.....	1	2	5	.....	22
Warsaw	May 25	445,770	221	.....	.....	2	.....	.....	3	2	.....	.....
Calcutta	May 4	433,219	209	29	.....	4	.....	.....	.....	.....	2	.....
Rome	Apr. 27	404,449	181	.....	.....	3	.....	3	.....	7	.....	.....
Rome	May 4	404,449	171	.....	.....	2	.....	1	.....	5	.....	.....
Amsterdam	May 18	399,051	171	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amsterdam	June 1	399,051	189	.....	.....	.....	1	1	1	3	.....	.....
Cairo	Apr. 25	374,838	374	.....	.....	3	.....	19	.....	.....	5	1
Cairo	May 2	374,838	386	.....	.....	11	.....	20	.....	.....	3	4
Cairo	May 9	374,838	389	.....	.....	9	.....	18	.....	2	3	3
Cairo	May 16	374,838	408	.....	.....	11	.....	15	.....	.....	6	2
Copenhagen	May 25	307,000	.....	.....	.....	.....	.....	1	.....	7	.....	.....
Alexandria	Apr. 25	231,396	199	.....	.....	1	2	1	.....	.....	10	.....
Alexandria	May 2	231,396	187	.....	.....	2	.....	.....	.....	.....	4	.....
Alexandria	May 9	231,396	183	.....	.....	2	.....	2	.....	.....	5	.....
Alexandria	May 16	231,396	189	.....	.....	3	.....	1	.....	.....	3	.....
Belfast	June 1	229,622	101	.....	.....	.....	.....	2	.....	.....	.....	.....
Palermo	June 1	250,000	61	.....	.....	.....	.....	.....	1	2	.....	.....
Rotterdam	June 1	197,724	93	.....	.....	.....	.....	.....	.....	.....	10	.....
Genoa	June 1	179,977	89	.....	.....	.....	1	.....	.....	1	.....	.....
Toronto	June 14	175,000	25	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stuttgart	June 1	125,510	43	.....	.....	.....	.....	.....	1	1	.....	.....
Barmen	June 1	109,000	42	.....	.....	.....	1	.....	.....	.....	15	1
Leghorn	June 2	102,893	36	.....	.....	.....	.....	.....	.....	1	.....	.....
Cadiz	June 2	65,028	42	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	May 26	23,631	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	June 14	17,300	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	May 18	7,428	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	May 26	7,428	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	June 1	7,428	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	June 8	7,428	3	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

NEW YORK QUARANTINE—*Staten Island, New York.*—The following telegram has been received in reply to one from this Bureau relative to the reported case of yellow fever in Brooklyn:

QUARANTINE, STATEN ISLAND, *June* 21, 1889.

I have seen no case of yellow fever from Colon. Surgeon Duncan, of Colon, who was brought from Brooklyn to quarantine hospital, was suffering from remittent fever. Will recover. The case of child Calderon, in New York, physicians report as bilious remittent fever.

WM. M. SMITH,
Health Officer.

GULF QUARANTINE STATION—*North Chandeleur Island, Gulf of Mexico.*—Passed Assistant Surgeon H. R. Carter reports as follows:

June 7, 1889.—I have the honor to report the arrival of the British ship "Prince Lucien," of Liverpool, this day, forty-eight days from Rio Janerio, via Barbadoes, in rock and earth ballast; twenty-one in crew; all well on arrival; left three men sick in Rio—one with yellow fever; and two more, who were ashore just before she left, taken sick

on the second day out with the same. One died on the 26th of April (four days of sickness). No other cases of suspicious nature.

Vessel clean above ballast, and bilge fairly good. Although soiled by ballast, not offensive, but earthy in taste. Unless the ballast (it is of fair quality) was infected in Rio, I do not believe the ship is infected. The two cases on the night of 21st of April (cleared on the 20th) were pretty certainly contracted ashore, and the fact of there having been no other cases since, with the large and mainly unacclimated crew (there are five apprentices) working in the hold and forecastle cleaning ship, renders it probable that the ship is clean, at least above the ballast.

June 11.—I have the honor to report the arrival of the British ship "Prince Frederick," of Liverpool, fifty-five days from Rio Janeiro, via Barbadoes, to Ship Island, in rock ballast.

Said vessel had twelve men sick with yellow fever in Rio, four dying; one man only sick, and dying, on the way up, 22d of April. This man undoubtedly contracted sickness aboard the vessel, as did several others.

She has been cleaned as far as possible by the master, and was subjected to some disinfection at Barbadoes, without moving ballast.

In my opinion she is clean above the ballast; below, doubtful.

ALABAMA — *Mobile.* — Month of May, 1889. Population, 40,000. Total deaths, 76, including diarrhœa, 3; dysentery, 3.

CALIFORNIA—*San Francisco.*—Month of May, 1889. Population, 330,000. Total deaths, 456, including croup, 3; dysentery, 2; diphtheria, 6; erysipelas, 1; enteric fever, 12; leprosy, 1; measles, 1, and scarlatina, 1.

Oakland.—Month of May, 1889. Population, 60,000. Total deaths, 63, including croup, 1; diphtheria. 4; scarlet fever, 2; measles, 1, and whooping-cough, 1.

Sacramento. — Month of May, 1889. Population, 35,000. Total deaths, 38, including diarrhœa, 1; dysentery, 1, and enteric fever 1.

San Diego.—Month of May, 1889. Population, 32,000. Total deaths, 11, including phthisis pulmonalis, 5, and dysentery, 2.

Reports to the State board of health from seventy-nine towns in California, having an aggregate population of 725,450, during the month of May, show a total of 885 deaths from all causes, including consumption, 146; pneumonia, 52; diarrhœa and dysentery, 33; diphtheria, 24; croup, 8; whooping-cough, 11; scarlet fever, 5; measles, 2; enteric fever, 20, and erysipelas, 3.

CONNECTICUT.—Reports to the State board of health from one hundred and sixty-five towns, having an aggregate population of 754,722, show a total of 932 deaths from all causes, including measles, 11; scarlet fever, 11; diphtheria and croup, 43; whooping-cough, 5; erysipelas, 1; enteric fever, 13; diarrhœa, 19; consumption, 119; pneumonia, 82.

GEORGIA—*Savannah.*—Month of May, 1889. Population, 57,000.

Total deaths, 116, including diarrhœa, 1; dysentery, 3, and enteric fever, 1.

ILLINOIS—*Galesburg.*—Month of May, 1889. Population, 17,000. Total deaths, 6. No zymotic diseases.

IOWA.—Reports to the State board of health, Des Moines, are as follows:

Davenport—April, 1889. Total deaths, 28, including croup, 6; diphtheria, 5; consumption, 1; pneumonia, 3.

Des Moines—April, 1889. Total deaths, 31, including consumption, 3; pneumonia, 10; croup, 1; diphtheria, 1; scarlet fever, 1.

Dubuque—April, 1889. Total deaths, 23, including consumption, 2, and enteric fever, 1.

Keokuk—April, 1889. Total deaths, 18, including consumption, 3; pneumonia, 2, and diptheretic croup, 2.

MICHIGAN.—Reports to the State board of health, Lansing, from fifty observers, indicate that for the week ended June 8, 1889, whooping-cough increased, and inflammation of the bowels, tonsilitis, influenza, inflammation of the kidneys, and pneumonia decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week ended June 8, and since, at eight places; scarlet fever at fifteen places; enteric fever at twelve places; measles at five places; and small-pox, one case in hospital at Detroit.

MINNESOTA—*Minneapolis.*—Month of April, 1889. Population, 200,000. Total deaths, 188, including enteric fever, 5; diphtheria, 16; scarlet fever, 5; whooping-cough, 1, and erysipelas, 1.

Month of May, 1889. Total deaths, 165, including enteric fever, 3; diphtheria, 22; scarlet fever, 3, and erysipelas, 1.

OHIO—*Cincinnati.*—Month of May, 1889. Population, 325,000. Total deaths, 518, including croup, 5; diarrhœa, 9; dysentery, 8; diphtheria, 34; erysipelas, 4; measles, 7; scarlatina, 2; enteric fever, 7, and whooping-cough, 2.

RHODE ISLAND—*Newport.*—Month of May, 1889. Population, 22,000. Total deaths, 26. No deaths from zymotic diseases.

TENNESSEE—*Chattanooga.*—Month of May, 1889. Population, 40,000. Total deaths, 63, including croup, 1; diarrhœa, 1; enteric fever, 3, and whooping-cough, 1.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Philadelphia, Pa.	June 15	1,040,245	395	.....	.....	.....	.....	.....	.....	14	5	6	11	1
Chicago, Ill	June 15	830,000	268	.....	.....	.....	.....	.....	.....	7	3	19	7	1
Brooklyn, N. Y.	June 15	821,525	377	.....	.....	.....	.....	.....	.....	1	3	15	3	7
Baltimore, Md	June 15	500,343	155	.....	.....	.....	.....	.....	.....	2	...	2	1	1
San Francisco, Cal.	June 8	330,000	101	.....	.....	.....	.....	.....	.....	2	1	1	1	.....
Cincinnati, Ohio	June 15	325,000	114	.....	.....	.....	.....	.....	.....	2	.....	5	3	.....
New Orleans, La.	June 8	254,000	148	.....	.....	.....	.....	.....	.....	1	.....	1	1	.....
Pittsburgh, Pa.	June 15	230,000	88	.....	.....	.....	.....	.....	.....	4	4	3	.....	2
Detroit, Mich.	June 8	230,000	44	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Louisville, Ky.	June 15	227,000	88	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....
Washington, D. C.	June 15	225,000	93	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Milwaukee, Wis.	June 15	210,000	40	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Minneapolis, Minn.	June 15	200,000	36	.....	.....	.....	.....	.....	.....	2	1	2	.....	.....
Newark, N. J.	June 11	183,563	83	.....	.....	.....	.....	.....	.....	1	.....	5	.....	2
Kansas City, Mo.	June 15	180,000	33	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Rochester, N. Y.	June 15	130,000	27	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Providence, R. I.	June 15	127,000	35	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1
Denver, Colo.	June 14	100,000	28	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....
Richmond, Va.	June 15	100,000	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toledo, Ohio	June 14	83,500	18	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Nashville, Tenn.	June 15	65,153	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	June 15	65,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	June 16	60,145	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	June 8	42,000	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	June 15	42,000	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	May 31	40,000	11	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Davenport, Iowa	June 15	33,715	15	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....
San Diego, Cal.	June 8	32,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	June 15	30,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa	June 15	30,000	4	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Auburn, N. Y.	June 15	26,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	June 15	25,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Newport, R. I.	June 13	22,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	June 8	21,553	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Newton, Mass.	June 15	21,553	12	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa	June 15	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	June 15	15,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 26. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., June 28, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended June 28, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended June 8, corresponded to an annual rate of 17.7 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Leicester, viz., 10.1, and the highest in Preston, viz., 36.1 a thousand. Diphtheria caused 3 deaths in Manchester, 3 in Salford, 3 in Sheffield, and 2 in Birmingham.

London.—One thousand three hundred and six deaths were registered during the week, including measles, 39; scarlet fever, 12; diphtheria, 34; whooping-cough, 26; enteric fever, 3; diarrhœa and dysentery, 19. The deaths from all causes corresponded to an annual rate of 15.7 a thousand. Diseases of the respiratory organs caused 205 deaths. In greater London 1,594 deaths were registered, corresponding to an annual rate of 14.7 a thousand of the population. In the "outer ring" the deaths included measles, 7, diarrhœa, 7, and diphtheria, 6.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended June 8, in the 16 principal town districts of Ireland, was 20.5 a thousand of the population. The lowest rate was recorded in Galway, viz., 3.4, and the highest in Drogheda, viz., 38.1 a thousand. In Dublin 144 deaths were registered, including measles, 5, enteric fever, 3; typhus, 1; whooping-cough, 1, and diphtheria, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended June 8, corresponded to an annual rate of 19.4 a thousand of the population, which is estimated at 1,314,274. The lowest mortality

was recorded in Greenock, viz., 13.3, and the highest in Glasgow, viz., 23.4 a thousand. The aggregate number of deaths registered from all causes was 497, including measles, 23; scarlet fever, 5; diphtheria, 2; whooping-cough, 29; fever, 1, and diarrhœa, 16.

During the month of May, 1889, 2,469 deaths were registered in these towns, including whooping-cough, 184; typhus, 5; enteric fever, 11; measles, 115; diarrhœa and dysentery, 41; diphtheria, 36, and scarlatina, 21.

Calcutta.—The total number of deaths registered during the first quarter of 1889 was 2,814, including fevers, 684; cholera, 371; diarrhœa, and dysentery, 299; and small-pox, 22. The general mortality compares favorably with the corresponding quarters in the previous decade, but is greater than that for the corresponding quarter of 1886.

The total number of deaths registered in March 1889, was 835 against 853 in the preceeding month. The proportion of male to female deaths was as 144 to 100. The monthly total is less than all the corresponding figures of the past decade. Compared with the corresponding month of the previous year, there was a decrease of 240 deaths. The deaths included cholera, 123; small-pox, 12; fevers, 218; bowel complaints, 68.

FRANCE—*Marseilles.*—During the month of May, 1889, there were 796 deaths registered, including small-pox, 6; enteric fever, 15; diphtheria and croup, 20; measles, 62; whooping-cough, 10, and diarrhœa and enteritis, 74. The health of the city was fairly good, excepting the unusual prevalence of measles among children in a certain quarter.

DENMARK—*Copenhagen.*—The following is a translation of a quarantine order issued by the Danish Government, under date of May 27, 1889:

The small-pox epidemic in Lisbon having ceased, the public notice of the ministry of justice, dated March 12, 1889, requiring a general examination, according to section 2, paragraph 1, of the law of July 2, 1880, of ships coming from that place, are hereby discontinued; and the provisions of the same notice prohibiting the importation from there of the articles named in paragraph 32 of said law, and requiring special attention to be paid to the cleansing, under official inspection, of linen, clothing, and bed-clothes brought from said place as the personal effects of travelers, are hereby suspended. There is no quarantine at present. The provisions of section 2, paragraph 1, of the law of July 2, 1880, referring to precautionary measures against the introduction of contagious diseases into the Kingdom are hereafter to be enforced with reference to the following places: Marseilles; ports in Sicily; Trieste; all ports in Egypt; ports in Tonkin and Cochin China, and in the East Indies, including the Dutch East Indian colonies; ports on the Red Sea; ports in Brazil; Cuba; Hayti; Porto Rico. The prohibition against the importation into the Kingdom of used linen, used articles of

clothing, and used bed-clothes, providing the articles named do not constitute the personal effects of travelers; waste cotton or wool, refuse paper, hair and hides, remains in force in regard to all the above-named places. In addition thereto, special attention is to be paid to the cleansing, under official inspection, of linen, clothing, and bed-clothes brought from any of the above-named places as the personal effects of travelers. This order to go into effect at once.

CUBA—*Cardenas.*—June 15, 1889. Cyclone of rain. Health good.

Havana.—Fourteen deaths from yellow fever, and one from small-pox are reported for the week ended June 14, and 11 from yellow fever during the week ended June 21, 1889.

UNITED STATES OF COLOMBIA—*Cartagena.*—The United States consul reports under date of May 25, 1889, that "the two cases of yellow fever in hospital were of unacclimated troops, and sporadic." On June 1 there were "three cases of sporadic yellow fever. The president of the board of health informs me that there has not been, and is not likely to be, any danger of its taking an epidemic form."

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	June 8	5,642,015	1,594	.....	.....	.....	.....	3	15	40	46	.....
Glasgow	June 8	545,678	238	.....	.....	.....	.....	1	3	1	.....	16
Warsaw	May 25	445,770	221	.....	.....	2	.....	.....	3	2	.....	.....
Warsaw	June 1	445,770	213	.....	.....	3	.....	.....	1	.....	.....	.....
Calcutta	May 11	433,219	201	21	.....	4	.....	.....	.....	.....	.....	.....
Amsterdam	June 8	399,051	229	.....	.....	.....	.....	.....	.....	3	.....	.....
Copenhagen	June 1	307,000	148	.....	.....	.....	.....	.....	1	4	.....	.....
Edinburgh	May 18	266,900	88	.....	.....	.....	.....	.....	.....	2	.....	4
Edinburgh	May 25	266,900	85	.....	.....	.....	.....	.....	.....	.....	1	3
Palermo	June 8	250,000	71	.....	.....	.....	.....	.....	2	1	.....	.....
Genoa	June 8	179,999	81	.....	.....	.....	1	.....	.....	2	.....	.....
Trieste	June 1	154,500	46	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trieste	June 1	154,500	62	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stuttgart	June 8	125,510	40	.....	.....	.....	.....	.....	.....	1	.....	.....
Pernambuco	May 21	120,000	88	.....	.....	.....	1	1	1	.....	.....	.....
Barmen	June 8	109,000	48	.....	.....	.....	.....	.....	.....	.....	8	.....
Leghorn	June 9	102,893	38	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	May 18	76,400	25	.....	.....	.....	.....	1	1	.....	.....	.....
Leith	May 25	76,400	27	.....	.....	.....	.....	.....	.....	3	.....	.....
Cadiz	June 8	65,028	37	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	June 13	23,800	22	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	June 2	23,561	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	May 25	20,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	June 1	20,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	June 8	20,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	June 21	17,300	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	May 1	5,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	May 8	5,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	May 15	5,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	May 22	5,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	May 29	5,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	May 20	1,020	0	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	May 27	1,020	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

MASSACHUSETTS—*Newton.*—Month of May, 1889. Population, 21,553. Total deaths 17, including diphtheria, 2, and enteric fever, 1.

MICHIGAN.—Reports to the State board of health, Lansing, from fifty-four observers, during the week ended June 15, 1889, show that diphtheria, diarrhœa, inflammation of the kidneys, consumption of lungs, inflammation of bowels, and measles increased, and bronchitis, erysipelas, rheumatism, whooping-cough and tonsilitis decreased in area of prevalance. Including reports by regular observers and others, diphtheria was reported present during the week ended June 15, and since, at ten places; scarlet fever, at twenty places; enteric fever, at five places; and measles, at ten places.

PENNSYLVANIA—*Williamsport.*—Month of May, 1889. Population, 33,444. Total deaths, 14. No contagious diseases.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	June 22	1,570,428	760	.....	.....	.....	.....	.....	.....	6	8	32	5	8
Philadelphia, Pa.	June 22	1,040,245	400	.....	.....	.....	.....	.....	.....	17	10	6	6	1
Brooklyn, N. Y.	June 22	821,525	.....	.....	.....	.....	.....	.....	.....	3	7	17	.....	6
Baltimore, Md.	June 22	500,343	228	.....	.....	.....	.....	.....	.....	5	2	2	1	.....
San Francisco, Cal.	June 14	330,000	97	.....	.....	.....	.....	.....	.....	6	.....	1	.....	.....
Cincinnati, Ohio.	June 22	325,000	115	.....	.....	.....	.....	.....	.....	4	.....	4	6	1
New Orleans, La.	June 15	254,000	117	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....
Washington, D. C.	June 22	225,000	122	.....	.....	.....	.....	.....	.....	2	2	2	1	1
Milwaukee, Wis.	June 22	210,000	54	.....	.....	.....	.....	.....	.....	3	1	.....	.....	.....
Minneapolis, Minn.	June 23	200,000	38	.....	.....	.....	.....	.....	.....	.....	2	2	.....	.....
Pittsburgh, Pa.	June 22	230,000	100	.....	.....	.....	.....	.....	.....	4	4	.....	2	1
Providence, R. I.	June 22	127,000	50	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	2
Denver, Colo.	June 21	100,000	43	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Richmond, Va.	June 22	100,000	43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toledo, Ohio.	June 21	83,500	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn.	June 22	65,153	21	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Fall River, Mass.	June 22	65,000	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	June 22	60,145	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynn, Mass.	June 22	50,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	June 15	42,000	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	June 22	42,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	June 7	40,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa.	June 17	35,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Davenport, Iowa.	June 22	33,715	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	June 15	32,000	6	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Altoona, Pa.	June 22	30,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	June 23	30,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	June 22	26,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	June 22	25,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Newport, R. I.	June 19	22,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	June 22	21,553	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa.	June 22	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	June 22	15,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 27. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., July 5, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended July 5, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended June 15, corresponded to an annual rate of 16.6 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz., 11.1, and the highest in Preston, viz., 33.0 a thousand. Diphtheria caused 3 deaths in Manchester, and 2 in Salford.

London.—One thousand two hundred and forty-seven deaths were registered during the week, including measles, 32; scarlet fever, 11; diphtheria, 26; whooping-cough, 39; enteric fever, 8; diarrhœa and dysentery, 34. The deaths from all causes corresponded to an annual rate of 15.0 a thousand. Diseases of the respiratory organs caused 169 deaths. In greater London 1,551 deaths were registered, corresponding to an annual rate of 14.3 a thousand of the population. In the "outer ring" the deaths included measles, 6; diarrhœa, 8; diphtheria, 7, and whooping-cough, 7.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended June 15, in the 16 principal town districts of Ireland, was 22.0 a thousand of the population. The lowest rate was recorded in Galway, viz., 3.4, and the highest in Waterford, viz., 32.4 a thousand. In Dublin 150 deaths were registered, including measles, 1, enteric fever, 1; whooping-cough, 3; diarrhœa, 1; dysentery, 1, and erysipelas, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended June 15, corresponded to an annual rate of 20.5 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Perth, viz., 11.1, and the highest in Paisley, viz., 24.9 a thousand. The aggregate number of deaths registered from all

causes was 524, including measles, 26; scarlet fever, 3; diphtheria, 10; whooping-cough, 35; fever, 4, and diarrhœa, 17.

Malta.—The United States consul, under date of June 5, 1889, transmits the following dispatch to the Secretary of State:

In compliance with the act of April 29, 1878, I have the honor to transmit herewith a report, in duplicate, of the diseases and deaths in the Malta Islands from the 1st to the 15th of May, 1889.

I usually transmit these reports and returns under separate cover and posted as "printed matter," but the above-mentioned reports are, this time, forwarded to you under cover of a dispatch in order that I may at the same time inclose certain newspaper articles treating upon the important subject of "Malta fever."

The Duke of Edinburgh having contracted and taken away with him this "Malta fever," at the time he relinquished his Admiral's command in the Mediterranean, and having been treated for this fever after his arrival in England, has called wide attention to the origin and character of the disease—the medical journals in England and on the continent giving it much professional study and attention.

I consider it of interest and importance, therefore, that I transmit at this time several articles that were published in the local newspapers of Malta, written upon the subject of the so-called "Malta fever." These articles I have clipped from the papers, and herewith inclose for the information of the Surgeon-General of the Marine-Hospital Service in Washington. In several instances these articles were written by physicians who have had large practice with fever cases.

It is a significant fact that by far the largest number of "Malta-fever" patients are found among the naval population—contracted, it is thought, from living on or near the Grand Harbor, into which more or less drainage from the towns finds its way and becomes stagnant. The articles inclosed treat upon the subject with considerable thoroughness. The more intelligent of the Maltese people claim that this fever is not peculiar to Malta, but is of the same general character as those fevers that are met with at Rome, Naples, Leghorn, and other Mediterranean towns. They resent its being called "Malta fever," to the detriment, they say, of the reputation for healthfulness of the Maltese Islands. That the fever is of a malarial character is generally admitted.

The disease return herewith gives all the information called for in the Surgeon-General's Form No. 1974, relating to causes of death, population of the island, prevailing diseases, and other similar intelligence.

The health of the native population is at this date good.

The percentage of sick in the military hospitals is at present but a trifle over 3§ per cent., while that in the naval hospital is between 6 and 7.

Extracts from Malta newspapers upon the subject of the so-called Malta fever.

Now that the Duke of Edinburgh is reported to be convalescent and to be rapidly shaking off the last effects of the illness which prostrated him, it may not be inopportune to devote a small amount of attention to the malady from which he has been suffering. We do not propose

to consider the pathology of Maltese fever, which is simply a remittent fever of a low type, with its accompanying and consequent prostration. It strongly resembles the fever from which our troops suffered so severely during the Ashantee expedition fifteen years ago, and the worst features about it are the tenacity with which it clings to its victim and the possibility that an attack of it may not pass away without inflicting some permanent injury on the constitution. It may be fairly asked, however, why this malady should be allowed to exist at all; why it should not be stamped out by the removal of its cause. Upon this point there is no doubt whatever. The origin of Maltese fever is to be found in the pestiferous condition of the Grand Harbor at Malta. This is the receptacle of the sewage of the numerous men-of-war and merchant vessels lying at anchor, as well as of that of a great part of Valletta and of the whole of the thickly-populated district, which, on the other side of the harbor, surrounds the Dockyard Creek, itself perhaps the most foul and noisome portion of the port. In this country the discharge of a similar quantity of sewage into a large harbor, though it might not be absolutely free from objection, would at least be a matter of comparatively little import. The rush of the tide would keep it in constant motion and would sweep it away twice in each four-and-twenty hours. In Malta, however, the case is widely different. The rise and fall of the tide, if it has any existence at all, as some people contend, is thoroughly irregular and of the most trivial description. It is at any rate wholly insufficient to impart any useful motion to the mass of water, whilst the prevailing absence of wind during some six months of the year removes an important factor from the cleansing process. The result is that the harbor is nothing more nor less than a vast open cesspool with all its dangers. The process of fermentation goes on unceasingly, and is assisted and intensified by the rays of a broiling sun, whose power from about the beginning of May to the end of September is unmitigated by a single cloud. As soon as the hot weather commences the fever season sets in, and the ships in harbor begin to contribute their pitiful arrray of cases. It may possibly be pointed out that it was not during the summer months that the illness of the Duke of Edinburgh occurred. This is no doubt true; but fever is almost always present in a greater or less degree. Besides, His Royal Highness had, we believe, already suffered from one attack, which would leave a certain predisposition to a return of the malady, and furthermore, the poison sometimes lies dormant for such a length of time that there is absolutely no telling when the seeds were sown, which were quickened into life by exposure during the operations consequent upon the stranding of the Sultan.

It is a noticeable fact that troops stationed at Malta suffer in a very slight degree from the fever. The reason is obvious to anyone who knows that they are almost without exception quartered either in barracks erected upon high ground at some little distance from the harbor or in forts overlooking the open sea. The crews of ships in port, however, have to work by day and to sleep by night in an atmosphere laden with the noxious products of decomposing sewage, and the result is as certain as anything can be. It is found in a long and dreary list of fever cases. Apart, however, from hygienic considerations, Malta is one of the last places where the sewage ought to be disposed of by being allowed to drain into the sea. Such a method of getting rid of it means simply a mischievous and dangerous waste of material that might

readily be turned to very much more advantageous account. Why should not the sewage be applied to the land? Surely in a place like Malta, there is a very reason why the experiment should be tried. Not only would it get rid of a dangerous nuisance, but it would provide an abundant supply of a valuable fertilizer in the midst of a hard-working community trusting largely to the produce of the land for its support and its wealth. Productive and highly-cultivated, too, as much of it is, the island is, after all, only a volcanic rock, whose sole carpet is artificial soil. Nowhere does the earth lie really deeply; in innumerable cases the covering it affords is exceedingly thin; in not a few instances the original rock crops through. There was, we believe, a time when a law existed that no vessel should be allowed to enter the harbor unless she brought with her a quantity of soil in proportion to her tonnage and deposited it on the island. The necessity for such a regulation has passed away, but there is still ample room for the employment of the rich soil which is to be obtained from properly-treated sewage. If it be suggested that the experiment would be a costly one, it may be applied, in the first place, that the sludge resulting from the treated sewage would have a marketable value; and, in the second place, that it would pay the English Government to guarantee a certain subsidy, if necessary, in order to ensure the health of its ship's crews, who are now the principal sufferers.—*Post.*

The *British Medical Journal* of the 18th instant contains an exhaustive and able article entitled "Observations on Malta Fever" by Surgeon David Bruce, M. S. assistant professor of pathology, Royal Victoria Hospital. A large number of the London and provincial press have had something to say on the subject in connection with the illness of the Duke of Edinburgh, and many foolish and incorrect remarks have been printed. The idea exists that "the origin of Maltese fever is to be found in the pestiferous condition of the Grand Harbor at Malta. This is the receptacle of the sewage of the numerous men of war and merchant vessels lying at anchor, as well as of that of a great part of Valetta and of the whole of the thickly-populated district which, on the other side of the harbor, surrounds the Dockyard Creek, itself perhaps the most foul and noisome portion of the port." We have already pointed out that the sewage of Valetta and the Three Cities has had its outfall at some distance at the back of Fort Ricasoli since some years. Whether it should be allowed to drain into the sea at all is another question, and we quote the following from the *Morning Post* of the 18th instant:

* * * * * * *

We publish in another column a short article from the *Globe* on the so-called "Maltese Fever," about which English people, as a rule, have some very hazy notions. The writer makes some extraordinary remarks, and shows an extraordinary ignorance not only as regards the fever itself, but also as regards the sanitary reforms which have been carried out in this Island since the last ten years.

It is known that the fever in question exists throughout the Mediterranean and is in no way peculiar to Malta; it is generally brought about by a severe chill caused by exposure to the heat of the sun or to night air. Malaria has nothing to do with it.

"The drainage from the town continuously pours into the harbor and the heavier constituents settle down to the bottom, &c.," says the

Globe. Now it is a fact that since ten years the outfall of the drainage is situated two or three miles outside the harbor and no sewage falls into it. The statement of our London contemporary is therefore entirely without foundation, leaving aside the fact that the Duke of Edinburgh never resided in or near the harbor.

In conclusion we would inform the *Globe* that sanitary science has been equal to diverting the land drainage of the island to some part of the coast where its poison germs can do no injury to human life, and we would advise him to be more careful in future as to the information he may receive, so as not to slander the sanitary reputation of the island, as has been done by him in such a careless and untruthful manner.—*Standard, May* 28.

The Duke of Edinburgh is by no means the first British naval officer who knows what a pestilent malady Maltese fever is. His attack appears to be severe, but fortunately in his case it was possible to send the invalid home at once, and, that being the best if not the only remedy, we may expect his speedy convalesence. The public will, no doubt, be puzzled to account for the periodic prevalence of fever at Malta at the beginning of the hot season. It can very easily be explained; malaria is unquestionably the cause. The drainage from the town continuously pours into the harbor, and the heavier constituents settle down to the bottom. There they remain, churned up by passing steamers, until the increasing heat of the sun creates the conditions favorable to the germination of malaria. That this is the origin of the annual epidemic is demonstrated by two facts: the troops on shore do not suffer, nor do the crews of ships a little way out at sea. It is the harbor alone which forms the hot-bed of the mysterious disease called Maltese fever. We use the word "mysterious" not because there is really any mystery about the cause, but in connection with the very varied developments assumed by the fever. Sometimes it is the brain, sometimes the blood, sometimes the lungs that it settles on; be it the one or the other, the victim is quickly reduced to a most feeble condition, and not infrequently succumbs. Six years ago, when the visitation was of a specially severe type, some men-of-war in harbor had a third of their crews on the sick-list. It may well be asked whether there is any real necessity for exposing our sailors to the pestilence. If it be impossible to find any other receptacle for the sewage than the harbor, the fleet might, at all events, be kept at a little distance from Malta during the unhealthy season. If occasion arose, it could be quickly brought back to the island. But we should imagine that sanitary science ought to be equal to diverting the land drainage to some part of the coast where its poison germs would do no injury to human life.—*The Globe, April* 29.

The Maltese papers are much put out at the statement in these columns concerning the above in connection with the Duke of Edinburgh. We are assured that it is a mistake, which we willingly rectify, that the drainage of Valetta now enters the harbor, and that consequently the fever cannot be generated by the impurities deposited therein, which in conjunction with a comparatively tideless sea, would be bound to breed fever. At the same time, from the personal observation of the writer of the article complained of, at no very recent date, the harbors at Malta were certainly not above suspicion. Whether or not any drainage is allowed since to enter them there is in no question

that an enormous amount of refuse is daily deposited by the men-of-war and merchantmen, the former, as we remarked before, being detained far too long in the early spring of the year in port. We may assure our contemporaries at Malta that whatever their opinions may be of the cause of the prevalence of fever at Malta it is certainly not shared in by the naval officers who are great sufferers whenever an epidemic arises, such as occurred some seven years ago. It is certainly curious if the sanitary condition of the harbors has nothing to do with the fact that in so many instances the navy only suffers, and the land forces as a rule escape scathless. Perhaps this explanation can be given by *Public Opinion* and the *Malta Standard.—Globe, May* 23.

Malta and Gozo.—One hundred and forty-six deaths were registered in the islands of Malta and Gozo from the 1st to the 15th of May, 1889, including measles, 4; whooping-cough, 3; dysentery, 25, and remittent fever, 2.

NETHERLANDS.—The deaths registered in the principal cities of the Netherlands, having an aggregate population of 1,129,678, during the month of April, 1889, corresponded to an annual rate of 22.3 a thousand. The lowest rate was recorded in Maastricht, viz., 13.7, and the highest in Hertogenbosch, viz., 36.4 a thousand. The deaths included typhus and enteric fevers, 8; measles, 56; croup, 20; whooping-cough, 24; diphtheria, 15, and diarrhœa and dysentery, 24.

BRAZIL—*Rio de Janeiro.*—For the week ended June 2, 1889, there were 379 deaths from all causes, in a population of 300,000, including yellow fever, 12; small-pox, 3; typhus fever, 6; enteric fever, 3, and diphtheria, 1.

Maceio.—For the month of May, 1889, there were 195 deaths registered from all causes, in a population of 17,000, including small-pox, 164. The sanitary condition of the city was reported as bad.

Pernambuco.—During the month of May, 1889, there was 1 death from yellow fever and 6 from beri-beri.

PORTO RICO—*San Juan.*—Month of April, 1889. Population, 23,000. Total deaths, 69, including small-pox, 1.

Month of May, 1889. Total deaths, 72. No deaths from contagious diseases. The United States consul says: "There being no report of diseases or deaths published, it is difficult to make a reliable report, as one would wish. I can, however, state that this island has been remarkably healthy for the past month."

CUBA—*Cardenas.*—June 21, 1889. Rainy, with much heat. Health of town and bay good.

NEW PROVIDENCE—*Nassau.*—June 22, 1889. City very healthy. Weather hot and rainy.

WEST INDIES—*Barbadoes.*—June 8, 1889. Health of island good.

PHILIPPINE ISLANDS—*Manila.*—Advices from San Francisco, with Hong Kong dates to May 23, 1889, are as follows:

The China *Mail* says: "The state of the public health at present in Manila is anything but satisfactory. Not only is cholera afflicting the people, but small-pox also carries off a goodly number of victims daily, besides other general diseases too common to be of any special mention. The following is a list of the deaths during the last few days in the different hospitals within the municipal radius of Manila, collected from our Manila files: From the 9th to the 10th of May—Cholera, 29; small-pox, 9; common diseases, 29. From the 10th to 11th of May—Cholera, 39; small-pox, 7; common diseases, 26. From 11th to 12th of May—Cholera, 39; small-pox 12; common diseases, 24. From 12th to 13th of May—Cholera, 27; small-pox, 7; common diseases, 18. From 13th to 14th of May—Cholera, 28; small-pox, 6; common diseases, 25. From 14th to 15th of May—Cholera, 28; small-pox, 7; common diseases, 18."

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Glasgow	June 15	545,678	236	.....	.....	.....	.....	3	2	6	.....	27
Copenhagen	June 8	307,000	150	.....	.....	.....	.....	.....	.....	1	.....	.....
Rotterdam	June 8	197,724	109	.....	.....	.....	.....	.....	.....	1	.....	.....
Toronto	June 22	175,000	32	.....	.....	.....	.....	.....	.....	1	.....	.....
Stuttgart	June 15	125,510	42	.....	.....	.....	.....	.....	.....	1	.....	.....
Pernambuco	May 28	120,000	88	.....	.....	.....	1	.....	2	.....	.....	.....
Pernambuco	June 4	120,000	95	.....	1	.....	.....	1	1	.....	.....	.....
Mayence	May 18	65,802	47	.....	.....	.....	1	.....	1	1	.....	.....
Mayence	May 25	65,802	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Georgetown, Dem	May 30	52,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Curaçao	June 15	25,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	June 20	23,800	24	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	June 9	23,631	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	May 24	13,500	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	May 31	13,500	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	June 7	13,500	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	June 14	13,500	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
LaGuayra	June 15	7,428	6	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

THE PREVENTION OF TUBERCULOSIS.—The following is the conclusion of a report forwarded to the board of health of New York City in response to the accompanying resolution of the board:

Resolved, That Drs. T. M. Prudden, H. M. Biggs, and H. P. Loomis, the pathologists of this department, be and are hereby requested to formulate a brief and comprehensive statement regarding the contagiousness of tuberculosis in man, stating therein the evidence of the same and recommending, in the briefest possible manner practicable, the simplest means of protection from its influence.

CONCLUSIONS.

1. That tuberculosis is a distinctly preventable disease:
2. That it is not directly inherited; and
3. That it is acquired by the direct transmission of the tubercle bacillus from the sick to the healthy, usually by means of the dried and pulverized sputum floating as dust in the air.

The measures, then, which are suggested for the prevention of the spread of tuberculosis are:

1. The security of the public against tubercular meat and milk, attained by a system of rigid official inspection of cattle:
2. The dissemination among the people of the knowledge that every tubercular person may be a source of actual danger to his associates, if the discharges from the lungs are not immediately destroyed or rendered harmless; and
3. The careful disinfection of rooms and hospital wards that are occupied or have been occupied by phthisical patients.—*Sanitary News, June* 22, 1889.

MICHIGAN.—Reports to the State board of health, Lansing, for the week ended June 22, 1889, indicate that bronchitis, remittent fever, erysipelas, and diarrhœa increased, and diphtheria, measles and influenza decreased in area of prevalance. Including reports by regular observers and others, diphtheria was reported present during the week, and since, at twelve places; scarlet fever, at seventeen places, and enteric fever, at five places.

NEW JERSEY.—*Hudson County.*—Month of May, 1889. Population, 282,254. Total deaths, 527, including measles, 3; scarlet fever, 18; diphtheria, 32; whooping-cough, 47, and enteric fever, 11.

VIRGINIA.—*Petersburg.*—Month of June, 1889. Population, 25,000. Total deaths, 55, including enteric fever, 1; dysentery, 3, and diarrhœa, 1.

REPORTS RECEIVED.

The following board of health reports have been received:

Bulletin of the North Carolina board of health, June, 1889.

Monthly Bulletin State board of health of Rhode Island, May 1, 1889.

Tenth annual report of the board of health, Atlanta, Ga.

Bulletin of the State board of health of Tennessee, June 15, 1889.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	June 15	1,569,556	718	.....	.....	.....	.....	.....	.....	4	26	50	8	19
New York, N. Y.	June 29	1,571,300	864	.....	.....	.....	.....	.....	.....	2	7	32	6	11
Philadelphia, Pa	June 29	1,040,245	493	.....	.....	.....	.....	.....	.....	5	2	5	5	3
Chicago, Ill	June 29	830,000	224	.....	.....	.....	.....	.....	.....	2	4	12	1	2
Brooklyn, N. Y.	June 29	821,525	514	.....	.....	.....	.....	.....	.....	2	1	11	5	10
Baltimore, Md	June 29	500,343	221	.....	.....	.....	.....	.....	.....	4	4	.....	.....	1
San Francisco, Cal.	June 21	330,000	90	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Cincinnati, Ohio	June 29	325,000	136	.....	.....	.....	.....	.....	.....	1	.....	8	13	.....
New Orleans, La.	June 22	264,000	125	.....	.....	.....	.....	.....	.....	.....	.....	10	.....	.....
Cleveland, Ohio	May 18	235,000	70	.....	.....	.....	.....	.....	.....	3	4	2	.....	.....
Cleveland, Ohio	May 25	235,000	82	.....	.....	.....	.....	.....	.....	5	1	3	1	1
Pittsburgh, Pa.	June 29	230,000	70	.....	.....	.....	.....	.....	.....	1	4	2	2	.....
Detroit, Mich.	June 22	230,000	62	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Detroit, Mich.	June 29	230,000	40	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Louisville, Ky.	June 29	227,000	63	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....
Washington, D. C.	June 29	225,000	136	.....	.....	.....	.....	.....	.....	2	2	.....	.....	1
Milwaukee, Wis.	June 29	210,000	38	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....
Minneapolis, Minn.	June 29	200,000	42	.....	.....	.....	.....	.....	.....	1	.....	1	1	.....
Newark, N. J.	June 18	183,563	91	.....	.....	.....	.....	.....	.....	.....	.....	5	1	1
Newark, N. J.	June 25	183,563	95	.....	.....	.....	.....	.....	.....	1	1	4	1	3
Kansas City, Mo.	June 22	180,000	62	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Kansas City, Mo.	June 29	180,000	68	.....	.....	.....	.....	.....	.....	1	.....	1	1	.....
Rochester, N. Y.	June 22	130,000	34	.....	.....	.....	.....	.....	.....	1	.....	1	.....	4
Rochester, N. Y.	June 29	130,000	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1
Providence, R. I.	June 29	127,000	48	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1
Richmond, Va.	June 29	100,000	52	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Denver, Colo.	June 28	100,000	30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toledo, Ohio	June 28	83,500	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn.	June 29	65,153	30	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Fall River, Mass.	June 29	65,000	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	June 29	60,145	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Lynn, Mass.	June 29	50,000	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	June 29	42,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	June 22	42,000	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	June 14	40,000	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Galveston, Tex.	June 21	40,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	June 24	35,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	June 22	32,000	3	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Binghamton, N. Y.	June 30	30,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	June 29	26,000	6	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Haverhill, Mass.	July 1	25,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	June 27	22,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	June 29	21,553	5	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Keokuk, Iowa	June 29	16,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	June 29	15,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract / No. 28. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., July 12, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended July* 12, 1889, *and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended June 22, corresponded to an annual rate of 16.7 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz., 9.9, and the highest in Manchester, viz., 27.1 a thousand. Diphtheria caused 2 deaths in Newcastle-upon-Tyne. Small-pox caused 1 death in Manchester.

London.—One thousand two hundred and forty-three deaths were registered during the week, including measles, 23; scarlet fever, 17; diphtheria, 27; whooping-cough, 27; enteric fever, 7; diarrhœa and dysentery, 40. The deaths from all causes corresponded to an annual rate of 14.9 a thousand. Diseases of the respiratory organs caused 171 deaths. In greater London 1,530 deaths were registered, corresponding to an annual rate of 14.2 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 6, and whooping-cough, 7.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended June 22, in the 16 principal town districts of Ireland, was 18.3 a thousand of the population. The lowest rate was recorded in Lisburn, viz., 0.0, and the highest in Kilkenny, viz., 25.4 a thousand. In Dublin 126 deaths were registered, including measles, 2; enteric fever, 2; diarrhœa, 2, and dysentery, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended June 22, corresponded to an annual rate of 19.4 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Greenock, viz., 12.6, and the highest in Leith, viz., 24.5 a thousand. The aggregate number of deaths registered from all

causes was 496, including measles, 21; scarlet fever, 5; diphtheria, 6; whooping-cough, 33; fever, 0, and diarrhœa, 18.

Calcutta.—The number of deaths registered in April, 1889, was 866, against 835 in the preceding month. The monthly total is less than all the corresponding figures of the past decade, excepting 1880 and 1886. The deaths include cholera, 104; small-pox, 17; fevers, 214, and bowel complaints, 65.

Malta and Gozo.—One hundred and fifty-four deaths were registered from the 16th to 31st of May, 1889, including measles, 3; continued fever, 1, and remittent fever, 1.

JAVA—*Batavia.*—The United States vice-consul, in his dispatch dated May 11, 1889, says:

I have the honor to transmit, herewith, the health report for this district during the first quarter of this year, as an indication of the general health of the place as well as of the prevalence of infectious diseases throughout the year, as the period under consideration presents an average record. It should be stated, in this connection, that quarantine regulations have been strictly enforced upon vessels arriving in Australian ports, from Java, since the epidemic here some five years ago; but those for other ports leave, at present, in free pratique.

One thousand and thirty-nine deaths were registered during the first quarter of 1889, including small-pox, 16, and cholera, 2.

BRAZIL—*Bahia.*—The United States consul, in his dispatch dated May 31, 1889, says:

I have the honor to report the sanitary condition of the city and the surrounding country much the same as in my dispatch of 11th instant. Slight showers have fallen in this city within the past three or four days, which have had the effect of rendering the weather agreeably cooler. Reports, however, from the interior of this Province of Bahia, as well as from Ceara, show that the people are suffering a great deal on account of the drought. Farina, the chief article of food amongst the negroes of this city and the people in general in the interior, has, on account of the dry weather, advanced to double the ordinary price. The daily and weekly newspapers of this city have opened their columns to receive money for the sufferers. What is called the "Bands Precatorio," an organized collecting procession, for the last three Sundays and one holiday this week passed through the streets of this city, headed by some twenty-four horsemen, next, a band of music, then a small chariot on which were adjusted some four or five statues with "worn and hungry look," placarded with the word "fome" (hunger), then some fifteen or twenty carriages, in which were men and boys receiving whatever was given them. In addition to this, a large number of young men with little hand-bags asked money of whomsoever they met on the sidewalks, going into street cars and entering the houses also; while six men, holding a large blanket outspread, moved along the street from side to side, receiving whatever money was dropped into it from those occupying the windows and balconies of the houses they passed. The object of this procession, with its black

banner, too, on which were inscribed, on the front and on the back, in large letters, the word "fome," doubtless was to arouse the people to a just sense of the needs of the suffering people of the interior, and to picture to the mind the necessity of giving, and giving liberally, for such a cause. By this means, too, a knowledge of the existing state of things was presented to many people who before were ignorant of it. The money collected was handed over to the committee appointed to see to its distribution.

From the reports that are read concerning the condition of the people, I would add, unless a thoroughly soaking rain comes very soon, speading over the whole area now covered by the "secca," as it is called, or drought, the outlook, already gloomy, will be gloomier and darker far, and the people in the provinces now afflicted will fall victims to a calamity, compared with which the yellow-fever epidemic during the past few months at Rio and other places south, though very severe, was but a trifling matter.

MEXICO—*Acapulco.*—Twenty-three deaths were registered during the month of April, 1889, including pneumonia 3, and diarrhœa 1.

During the month of May, 21 deaths were registered, including small-pox 5, and dysentery 2.

Vera Cruz.—The United States consul, under date of June 27, says: "There is no yellow fever here yet."

Tampico.—Yellow fever being reported as prevailing at Tampico, a telegram of inquiry was sent to Acting Assistant-Surgeon J. M. Main, Marine-Hospital Service, Brownsville, Tex., who wired reply as follows, July 8, 1889: "Received telegram of this date from Vice Consul-General. No advice of yellow fever at Tampico. Write to-night."

Notwithstanding this report, an inspection of the whole coast has been ordered.

CUBA—*Havana.*—Eight deaths from yellow fever were registered during the week ended June 27, 1889.

UNITED STATES OF COLOMBIA—*Cartagena.*—The United States consul, under date of June 15, says: "There is one case of yellow fever in hospital—sporadic."

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	June 15	5,642,015	.....	.....	.....	.....	.....	8	12	33	38	.....
London	June 22	5,642,015	1,530	.....	.....	.....	.....	7	20	29	26	.....
Paris	June 8	2,260,945	1,015	.....	.....	.....	.....	17	7	26	29	8
Paris	June 15	2,260,945	883	.....	.....	1	.....	10	7	41	14	10
Paris	June 22	2,260,945	894	.....	.....	2	.....	11	2	28	19	15
Glasgow	June 22	545,678	227	.....	.....	.....	.....	.....	1	2	34	25
Warsaw	June 8	445,770	285	.....	.....	3	.....	.....	.....	3	.....	.....
Warsaw	June 15	445,770	277	.....	.....	5	.....	.....	3	8	.....	.....
Calcutta	May 18	433,219	229	45	.....	1	.....	.....	.....	.....	.....	.....
Calcutta	May 25	433,219	203	33	.....	3	.....	.....	.....	.....	.....	.....
Rome	May 11	404,449	144	.....	.....	4	.....	3	1	2	.....	.....
Rome	May 18	404,449	180	.....	.....	4	.....	.....	1	9	.....	.....
Amsterdam	June 15	399,051	207	.....	.....	.....	.....	.....	.....	2	.....	.....
Amsterdam	June 22	399,051	152	.....	.....	.....	.....	1	.....	1	.....	.....
Copenhagen	June 15	309,000	153	.....	.....	.....	.....	1	.....	9	.....	.....
Edinburgh	June 1	266,900	76	.....	.....	.....	.....	2	1	1	1	4
Edinburgh	June 8	266,900	77	.....	.....	.....	.....	.....	.....	1	.....	.....
Palermo	June 15	250,000	69	.....	.....	.....	.....	.....	1	2	.....	.....
Palermo	June 22	250,000	89	.....	.....	.....	.....	.....	2	3	.....	.....
Queenstown	June 22	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belfast	June 8	229,622	100	.....	.....	.....	.....	2	.....	.....	.....	.....
Belfast	June 15	229,622	114	.....	.....	.....	.....	2	.....	.....	.....	.....
Belfast	June 22	229,622	90	.....	.....	.....	.....	1	.....	.....	.....	.....
Bristol	June 1	229,361	60	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bristol	June 8	229,361	57	.....	.....	.....	.....	3	1	.....	.....	.....
Bristol	June 15	229,361	72	.....	.....	.....	.....	.....	.....	1	.....	.....
Bristol	June 22	229,361	65	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rotterdam	June 22	197,724	150	.....	.....	.....	.....	.....	.....	30	.....	.....
Genoa	June 15	180,025	81	.....	.....	.....	1	.....	.....	.....	.....	.....
Genoa	June 22	180,025	81	.....	.....	1	1	.....	.....	1	.....	.....
Trieste	June 8	154,500	65	.....	.....	.....	.....	.....	.....	1	.....	.....
Stuttgart	June 22	125,510	40	.....	.....	.....	.....	.....	1	2	.....	.....
Havre	June 15	112,074	50	.....	.....	2	.....	3	.....	.....	.....	.....
Leghorn	June 25	102,893	32	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barmen	June 15	109,000	42	.....	.....	.....	.....	.....	1	1	6	.....
Barmen	June 22	109,000	56	.....	.....	.....	1	.....	.....	.....	2	.....
Leith	June 1	76,400	25	.....	.....	.....	1	.....	.....	1	.....	.....
Leith	June 8	76,400	27	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	June 1	65,802	29	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	June 8	65,802	33	.....	.....	.....	.....	.....	1	2	.....	.....
Cadiz	June 15	65,028	37	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	June 22	65,028	41	.....	.....	.....	.....	.....	.....	.....	.....	.....
Georgetown, Dem	June 13	52,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	June 15	23,631	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	June 27	23,800	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	June 15	20,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	June 22	20,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	May 13	1,020	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	June 3	1,020	0	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	June 10	1,020	0	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

FLORIDA—*Mortuary Table of the City of Jacksonville for June*, 1889.—Population, 30,000. Convulsions, 3; cholera infantum, 6; congestion of lungs, 1; phthisis pulmonalis, 6; congestion of brain, 2; cancer, 1; drowning, 1; entero-colitis, 1; typhoid fever, 3; typho malarial fever, 1; conjestive fever, 1; heart disease, 4; injury, 1; disease of liver, 1; meningitis, 1; pneumonia, 6; paralysis, 1; premature birth, 3; pertussis, 2; old age, 1; shock, 1; stricture, 1; ulcer, 1; unknown, 1. Total, 50. Death rate per 1000 per annum, 20.

Under one year, 17; one to five years, 13; five to twenty years, 4; twenty to forty years, 9; forty to seventy years, 4; seventy to one hundred years, 1; over one hundred years, 1.

Apalachicola.—Extract from quarantine proclamation for the ensuing quarantine season:

SEC. 2. * * * The board of health, upon information which is satisfactory to them, hereby establishes a quarantine against all countries and localities that are infected with plague or malignant, contagious, or infectious diseases, as well as against countries and localities holding communication with countries and localities where any plague exists, or other malignant, contagious, or infectious diseases are prevailing, or reported to exist. And would particularly enumerate South and Central America, all West Indian ports, the Isthmus of Panama, or Darien, and all ports upon the Gulf of Mexico, and any country or port the board may hereafter name. And boats or vessels from any of these countries or localities are forbidden to approach said city of Apalachicola, or the district over which this board of health has jurisdiction by law, or to land any such boat or vessel, or any boat or vessel, or person or persons, or goods, until they shall have performed quarantine in and in all respects conforming to the rules and regulations of the board of health.

The station for vessels entering East Pass shall be at Pilot Cove on the west side of East Pass at or near St. George's Island, and at a point about two miles east of the west end of Dog Island. No pilot shall leave any vessel at the Ballast Ground coming from infected or suspicious port under a penalty of a fine.

The station for vessels entering West Pass shall be at the buoy on Higgin's Flat.

SEC. 3. All vessels arriving from an infected or suspicious port will be held in quarantine not less than thirty days from date of departure from said port, and shall be cleansed and fumigated as the port physician or inspector may direct, and said vessel shall undergo a second disinfection and fumigation if deemed necessary by the port physician or inspector, except when such vessel may have undergone an examination and disinfection at Chandeleur Island, and furnishes satisfactory proof of same.

SEC. 4. Vessels arriving from ports named in section 2 requiring more than (30) thirty days to complete voyage will be held in quarantine (10) ten days, or longer, if deemed necessary by the quarantine physician or inspector.

* * * * * * *

SEC. 7. The quarantine physician or inspector shall be at all times, between sunrise and sunset, ready to visit and board all vessels as soon as apprised of their arrival in the bay at the points hereinafter designated by a flag-staff showing a yellow flag. He shall show a yellow flag conspicuously in his boat to designate his character, and if any vessel or boat shall, by any circumstances, pass by the quarantine boat or flag station, or refuse to obey the orders of the quarantine physician or inspector, the master or owner of any vessel or boat so offending shall be held to answer in fine, not exceeding $200 nor less than $20, and may or shall be imprisoned until such fine and cost shall be paid.

* * * * * * *

SEC. 10. * * * Should any vessel be permitted to discharge ballast while performing quarantine, such vessel or owners shall pay the board of health 75 cents per ton, the same to be done under direction and expenses of said board and must be paid as other fees are provided for.

SEC. 12. All vessels at the quarantine station shall keep a flag at half-mast at the fore during the day, and a lantern at the same position at night, and any master or person in charge violating this section shall be fined in a sum not exceeding $100 nor less than $10, which shall be paid by the master or owner of such vessel.

* * * * * * *

SEC. 15. It shall be the duty of the quarantine physician or inspector to visit every vessel coming from any port entering the bay of Apalachicola. He shall require the master or owner of every vessel thus inspected to pay, for the use of the board of health, as follows:

Boats over 20 tons 50 cents when stopping at the upper tow head flag, or $1 at flag at mouth of straight channel. Vessels 50 tons or under $2, and 100 tons or under $5, and 200 tons or under $6, and 300 tons or under $8, 400 tons or under $10, 600 tons or under $12, 800 tons or under $14, over 800 tons $16.

Vessels under ten tons coming from the sponge reefs on the east and St. Joseph on the west, having sailed for there from this port, shall be exempt from such charges, provided such excepted vessels shall have had no communication with any other boat or vessel from an infectious port.

The fees herein prescribed for inspecting any and all vessels or boats by quarantine physician or inspector shall be by him collected from the master or owner of said vessel before permission is given to land either person or persons, or the boat or vessel.

SEC. 16. Each and every vessel fumigated shall pay for such fumigation at the rate of four cents per ton American measurement, for first service, and if a second fumigation is required shall be two cents per ton, and also pay the costs of the disinfectants used as well as the cost of boat hire to reach such vessel, which fee, together with all other quarantine dues shall be collected in United States currency by the quarantine physician or inspector, or if such officer of the board elect he can receive an order or draft on consignees with the distinct understanding that same shall be honored on presentation, and if not so honored the vessel may be attached for such sum and cost of proceedings.

* * * * * * *

SEC. 18. That every pilot boat on the bars of Apalachicola, and masters of tugs and lighters, shall be supplied with copies of these regulations, and it shall be the duty of every pilot and master of tugs to furnish a copy of this proclamation to the master of every vessel which said pilot or master of tug or lighter may speak or board immediately upon said communication, and any pilot or master of tug failing or refusing to do so shall be fined in a sum not exceeding $100, and not less than $20.

* * * * * * *

SEC. 27. * * * And, whereas, it is understood between the U. S. Marine Hospital Service and the Apalachicola Board of Health, that all vessels destined to this port that shall have any infectious or contagious diseases on board, shall proceed without delay to the refuge

station at Chandeleur Island and there be subjected to special sanitary care.

Therefore be it resolved, That timber commission merchants, and all others interested, be furnished copies of these rules and regulations, and that the secretary of this Board send copies of this proclamation to the United States Marine-Hospital Service.

Adopted April 11, 1888.

J. D. RUSH, M. D.,
President.

Amendments to the sanitary regulations of the State board of health of Florida.

[For complete Rules and Regulations see Abstract No. 17, April 26, 1889.]

At a special meeting of the State board of health, convened in this city June 18, 19 and 20, the following amendments and alterations were made to the rules and regulations of the State board of health adopted April 6, 1889; and resolutions passed, and are published for the information of the public and all concerned, viz:

Municipal sanitation—section 1. Strike out the entire section and substitute the following: Section 1. All cities and towns of over 10,000 inhabitants shall be provided with a system of sewerage, and sufficient means for the proper collection and disposal of the filth, garbage and refuse of every description in such cities and towns; and all cities, towns or villages under 10,000 inhabitants, having no system of sewerage, shall be provided with sufficient other means for the prompt, frequent and sanitary collection and disposal of all filth, refuse and garbage of every description in such cities, towns and villages. The proper municipal authorities of incorporated cities and towns, or in cases of unincorporated towns and villages the county boards of health where such exist, or county commissioners where no county boards of health exist, shall see that such system of sewerage and means of collecting and disposing of filth, refuse and garbage are so provided, under penalties prescribed in section 15 of said act creating and establishing a State board of health above referred to.

Section 2. Strike out the entire section and substitute the following: Section 2. That the city council, board of aldermen or municipal authorities charged by law with such duties of all incorporated cities and towns in this State, or in cases of unincorporated towns, the county boards of health, where such exist, or the county commissioners where no county boards of health exist, shall provide for a house-to-house inspection of all such cities and towns, at least once a month, between the first day of May and the first day of November of each year, and that it may be done efficiently, it is also ordered by the State board that blanks for this purpose, as prescribed by this board, shall be used; setting forth the number of inmates of the house of each sex and color; whether any sickness exists in the house at the date of inspection; or has existed since last inspected; and the nature of such sickness in either case; and the general sanitary condition of the interior of the house and premises—especial note being made of the condition of the water-closets, cess-pools, sinks or private vaults; and the mayors of all incorporated cities and towns, and the presidents of county boards of health in those towns not incorporated, or presidents of boards of county commissioners where no county boards of health exist, are especially charged with the enforcement of this rule.

Communicable diseases of an epidemic, infectious or contagious nature. Section 2. Strike out the entire section and substitute the following: Section 2. It is hereby made the duty of the common council board of aldermen, or other officers of a chartered city or town in this State to provide for the vaccination and revaccination of the citizens residing in their several cities and towns. And it is also made the duty of every parent, guardian or other person charged with the care of, or responsible for any child, to see that said child is vaccinated, and to have said child or children vaccinated as often as the health authorities of a city or town, or county board of health in the State may direct: *Provided*, That the requirements of this section need not be enforced in sparsely-settled communities in this State except in a threatened epidemic from small-pox: *And provided further*, In any case, in the judgment of a reputable physician expressed in writing, such vaccination would be dangerous to the health of the person required to be vaccinated, such vaccination will not be required to be made. Fresh bovine virus only should be used in vaccinating in this State.

Section 3. Strike out the entire section and substitute the following: Section 3. After October 1, 1889, superintendents of all institutions of learning, and all school boards and principals of schools in this State, in incorporated cities and towns of over 2,000 inhabitants, are forbidden to admit as a pupil any child or person who cannot produce satisfactory evidence of having been successfully vaccinated.

Section 4. Strike out the entire section and substitute the following: Section 4. No owner or manager of any manufactory in this State, shall admit for employment any person who cannot produce satisfactory evidence of having been successfully vaccinated.

Collection of vital statistics—Strike out the entire section and substitute the following: The city council of every incorporated city or town, through its proper officers, and every county board of health having jurisdiction over unincorporated towns, shall collect and transmit to the secretary of the State board of health, on the first day of each month, a report of the month previous of the vital statistics of the several cities and towns as are severally within the control of each of said authorities, with a statement of the prevailing diseases during the previous month, and also any other information of a medical or sanitary nature that may be of value in the preservation of the public health. (N. B.—Blanks suitably prepared for the purpose of these observations and reports will be furnished free on application to the secretary of the State board of health.)

RESOLUTIONS PASSED.

Whereas this board does not feel authorized under the law creating it and defining its powers, to expend the State funds in providing and sustaining permanent quarantine establishments and appliances for any particular port or ports in the State; and

Whereas the State board of health realizes the difficulties and embarrassments which may be involved in the effort to carry out its rules and regulations under this head immediately; therefore,

Resolved, That in cases where the demands for sustaining intercourse with any foreign port or ports which might necessitate enforcing the quarantine restrictions, are not local only, but involve State or national interests; and, where application is made to this board through the

local health authorities to aid and supplement them in making such outlay for fulfilling the quarantine regulations of the State board of health, this board may, through its health officer, consider such application and, if deemed proper and advisable, such aid may be extended as far as the power and means of this board and the claims of such application shall appear to warrant.

Resolved, That Dr. Joseph Y. Porter, health officer of the State, is hereby authorized in particular instances that may arise to use such discretion in the enforcement of the rules and regulations of the board as may be considered wise and necessary, and as may be not inconsistent with the general spirit of the said rules and regulations: *Provided*, That the use of such discretion herein granted shall be approved by the president.

Resolved, That county boards of health in the various counties of the State be urged to reorganize immediately with the act creating county boards of health, approved June 7, 1889.

R. P. DANIEL,
President State Board of Health.

JOSEPH Y. PORTER,
Secretary and Health Officer.

RULES RECOMMENDED FOR RAILROAD QUARANTINE BY THE QUARANTINE CONFERENCE.

The following are the rules recommended by the committee appointed for that purpose at the quarantine conference held in Montgomery, Ala., March 5th to 7th inclusive, 1889. The rules after discussion were approved by the conference:

1. Quarantine should not be made against any place until it is officially known that yellow fever or other infectious or contagious disease exists at such place.

2. Only competent physicians should be put in charge of quarantine stations; and only thoroughly qualified persons should be employed as inspectors on railway trains.

3. Quarantine stations, located on railroads, should be established at convenient points, on one or both sides of a town or station, as may be deemed necessary.

4. If an epidemic of yellow fever or other infectious or contagious disease exists at a town or station, trains carrying passengers or freights should be required to pass through the limits of such towns or stations at a speed of not less than ten (10) miles per hour, without stopping at such towns or stations; but should stop at the quarantine station.

5. Passengers to or from such infected point should only be received or delivered at the quarantine station, under the supervision of the quarantine officer in charge of the station.

6. Railway tickets may be sold to persons leaving an infected place to any point willing to receive them.

7. All baggage from any infected point should be properly disinfected.

8. As far as practicable, the same rules proposed for railroads should be applied to vessels of every kind, stage coaches, or other means of travel.

9. The passage of railroad trains through any point on the line of road, whether infected or not, should not be prohibited by any quarantine regulations. The conductors of passenger trains should close the

windows and ventilators and lock the doors of cars passing through any place where a train is not permitted to stop.

10. All freight to any infected place should be delivered either at the quarantine station or the nearest railway station to such infected point, where it can be properly cared for.

11. All mail matter from any infected place should be properly disinfected by the United States Government. And mail matter intended for infected points should be put off the trains at the quarantine stations. The United States Government should instruct postmasters to receive and deliver mails at such quarantine stations.

12. Railroads and express companies, may receive for transportation from any infected place, during the time such infection exists, any merchandise or traffic consigned to places willing to receive it.

13. State authorities should employ competent persons on passenger trains, as inspectors of passengers, baggage and express matter, as additional precaution; but the fact of inspectors being on such trains should not relieve trains carrying passengers, or express matter or baggage, from stopping at quarantine stations for such inspection as the officer in charge may determine to be necessary.

14. It is recommended that all quarantines, as far as practicable, should be uniform in their requirements and operations, which will greatly contribute to the prevention of panics, and tend to allay unnecessary excitement and fear on the part of the people.

15. The form of health certificate adopted by the quarantine convention, held at Montgomery, March 5, 1889, should be prepared for health officers to issue, to such persons as may be found entitled to receive the same. A copy of this certificate should be printed with these rules, and conspicuously posted at railway stations.

——— ———, (*Office of Board of Health.*)
———, (*Date.*)

HEALTH CERTIFICATE.

Name, ——— ———. Residence, ———. How long in, ——. Destination, ——. Have you or your baggage been exposed to yellow-fever infection within the past thirty days? ——.

I solemnly swear that the answer to the above question is true: So help me God.

[Seal.] Signed, ——— ———, (*Name of Applicant.*)
Signed, ——— ———, (*Official.*)

16. It is the desire and intention of health authorities, as far as practicable, to throw every safeguard around the public health of all localities. Municipal, county, and State authorities are expected to co-operate in every possible way with health officers located in towns, villages, and cities, and in charge of quarantine stations, to enable them to prevent the introduction or spread of yellow fever or other infectious or contagious diseases.

These rules were the result of long and careful consideration, and are believed to be the best that can be made in the interest of all parties. The committee ask co-operation and patient trial of them, when it becomes necessary to put quarantines in force.

J. C. CLARKE, Ala.,
J. Y. PORTER, Fla.,
WM. BAILY, Ky.,
J. E. BLACK, Tenn.,
R. F. GRAY, N. C.,
C. M. SMITH, La.,
J. B. BAIRD, Ga.,
R. S. STARKWEATHER, Ill.,
H. B. HORLBECK, S. C.,
R. RUTHERFORD, Tex.,
O. R. EARLY, Miss.,
Committee.

REPORTS OF VESSELS AT NATIONAL QUARANTINE STATIONS—*Gulf Quarantine Station, North Chandeleur Island, June* 29.—Portuguese bark "Julius," arrived June 20, from Rio Janeiro. Destination, Pensacola. Cargo, earth ballast. Condition of vessel, moderately fair. Condition of ballast, good. Crew, numbering 14, all well. No sickness while at Rio, or on passage. No passengers. Ordered here from Pensacola, and held pending orders from owner.

South Atlantic Quarantine Station, Sapelo Sound, Georgia, June 29.—Norwegian bark "Falka," arrived June 16, from Rio Janeiro. Destination, Brunswick, Ga. Condition of vessel, suspicious. Eleven in crew, one sick with phthisis. Two cases of yellow fever while at Rio, and one on voyage which proved fatal. Captain declined to have ballast removed, claiming that it was unsafe to do so. The vessel was fumigated and cleansed above the ballast as well as possible. Certificate declined, except that this had been done, and that she was not unballasted, and hence suspicious at best. She sailed June 29, ostensibly for Canada or some extreme northern port where she can enter without unballasting. Brunswick, Ga., was notified that the quarantine officer declined to give a clean bill of health.

Cape Charles Quarantine Station, Virginia.—Week ended Friday, June 28, 1889. Seventeen vessels spoken, and one boarded, inspected, and discharged.

Week ended July 5. Ten vessels spoken, and one boarded, inspected, and discharged.

Delaware Breakwater Quarantine Station, Delaware.—Week ended June 30, 1889. Fourteen vessels inspected and passed. Number spoken not reported.

San Diego Quarantine Station, California.—Week ended June 29, 1889. Four vessels inspected and passed.

Port Townsend Quarantine Station, Wash.—Acting Assistant Surgeon S. B. Conover has been assigned in charge of this station, and on his arrival at that port regular quarantine inspection service will be begun.

MONTHLY REPORTS.

ILLINOIS—*Chicago.*—Month of June, 1889. Population, 830,000. Total deaths, 1,032, including croup, 16; diarrhœa, 9; dysentery, 3; diphtheria, 85; erysipelas, 7; measles, 14; small-pox, 1; and whooping-cough, 8.

Galesburg.—Month of June, 1889. Population, 17,000. Total deaths, 11, including measles, 1; scarlet fever, 1; and small-pox, 1. Six cases of contagious diseases were reported, including diphtheria, 2, and scarlet fever, 4.

IOWA—*Keokuk.*—Month of June, 1889. Population, 16,000. Total deaths, 15, including consumption, 4.

MICHIGAN.—Reports to the State board of health, Lansing, from 223 observers, indicate that for the month of June, 1889, as compared with the previous months, pneumonia, tonsilitis, and influenza decreased in area of prevalence. Including reports by regular observers, and others, diphtheria was reported present at twenty-three places; scarlet fever at thirty-seven places; enteric fever at sixteen places, and measles at nineteen places.

For the week ended June 29, reports from 61 observers indicate that intermittent fever, influenza, and tonsilitis increased, and that erysipelas and inflammation of the kidneys decreased in area of prevalence. Including reports by regular observers, and others, diphtheria was reported present during the week, and since, at ten places; scarlet fever at eleven places; enteric fever at five places, and measles at seven places.

MINNESOTA.—Reports to the State board of health for the month of May, 1889, show a total of 847 deaths, including measles, 17; scarlatina, 33; diphtheria, 60; croup, 10; enteric fever, 19; and diarrhœal diseases of children, 18.

NEW HAMPSHIRE—*Manchester.*—Month of May, 1889. Population, 42,000. Total deaths, 40, including croup, 2. Four cases of diphtheria, 11 of scarlet fever, and 6 of measles were reported during the month.

OHIO—*Cincinnati.*—Month of June, 1889. Population, 325,000. Total deaths, 529, including croup, 8; diarrhœa, 6; dysentery, 2; diphtheria, 36; erysipelas, 1; measles, 28; enteric fever, 9; and whooping-cough, 1.

PENNSYLVANIA—*Williamsport.*—Month of June, 1889. Population, 35,271. Total deaths, 9. No contagious diseases.

TENNESSEE—*Chattanooga.*—Month of June, 1889. Total deaths, 33, including dysentery, 3, and enteric fever, 1.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y	July 6	1,572,199	956	.....	.....	.....	.....	.....	.....	5	7	18	3	11
Philadelphia, Pa	July 6	1,040,245	422	.....	.....	.....	.....	.....	.....	4	.....	4	.....	3
Brooklyn, N. Y	July 6	834,607	484	.....	.....	.....	.....	.....	.....	1	1	12	1	5
Baltimore, Md	July 6	500,343	280	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
St. Louis, Mo	July 8	440,000	165	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....
Cincinnati, Ohio	July 6	325,000	151	.....	.....	.....	.....	.....	.....	1	1	6	9	.....
New Orleans, La	June 29	254,000	108	.....	.....	.....	.....	.....	.....	2	.....	2	3	.....
Louisville, Ky	July 6	227,000	69	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
Washington, D. C	July 6	225,000	120	.....	.....	.....	.....	.....	.....	4	.....	1	.....	1
Kansas City, Mo	July 6	180,000	42	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....
Rochester, N. Y	July 5	130,000	24	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	2
Providence, R. I	July 6	127,000	50	.....	.....	.....	.....	.....	.....	.....	1	4	1	2
Richmond, Va	July 6	100,000	48	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Denver, Colo	July 5	100,000	24	.....	.....	.....	.....	.....	.....	1	.....	1	1	.....
Toledo, Ohio	July 5	83,500	17	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Fall River, Mass	July 6	69,000	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn	July 6	65,153	21	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Charleston, S. C	July 6	60,145	37	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass	July 6	50,000	14	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Manchester, N. H	June 29	42,000	24	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Galveston, Tex	June 28	40,000	13	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1
San Diego, Cal	June 29	32,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y	July 6	30,000	9	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Altoona, Pa	June 29	30,000	13	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Altoona, Pa	July 6	30,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y	July 6	26,000	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Haverhill, Mass	July 5	25,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I	July 4	22,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass	July 6	21,553	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	July 6	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Rock Island, Ill	July 7	16,000	1	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Pensacola, Fla	July 6	15,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 29. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., July 19, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended July 19, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended June 29, corresponded to an annual rate of 17.3 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Bristol, viz., 13.0, and the highest in Manchester, viz., 25.9 a thousand. Diphtheria caused 2 deaths in Birmingham, 2 in Salford, 2 in Leeds, and 2 in Hull.

London.—One thousand two hundred and sixty-five deaths were registered during the week, including measles, 33; scarlet fever, 10; diphtheria, 13; whooping-cough, 27; enteric fever, 8; diarrhœa and dysentery, 57. The deaths from all causes corresponded to an annual rate of 15.2 a thousand. Diseases of the respiratory organs caused 169 deaths. In greater London 1,599 deaths were registered, corresponding to an annual rate of 14.8 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 8; whooping-cough, 5; scarlet fever, 6; measles, 5, and diptheria, 5.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended June 29, in the 16 principal town districts of Ireland, was 20.2 a thousand of the population. The lowest rate was recorded in Dundalk, viz., 4.4, and the highest in Kilkenny and Drogheda, viz., 25.4 a thousand. In Dublin 157 deaths were registered, including measles, 4; enteric fever, 6; diarrhœa, 2, and whooping-cough, 2.

Scotland.—The deaths registered in 8 principal towns during the week ended June 29, corresponded to an annual rate of 18.4 a thousand of the population, which is estimated at 1,314,274. The lowest mortality

was recorded in Edinburgh, viz., 14.2, and the highest in Glasgow, viz., 21.6 a thousand. The aggregate number of deaths registered from all causes was 471, including measles, 24; scarlet fever, 5; diphtheria, 5; whooping-cough, 24; fever, 4, and diarrhœa, 17.

TASMANIA—*Hobart.*—Month of April, 1889. Population, 34,693. Total number of deaths, 49, including enteric fever, 4.

FRANCE—*Marseilles.*—Month of June, 1889. Population, 375,378. Total deaths, 838, including small-pox, 15; enteric fever, 26; diphtheria and croup, 28; measles, 46; and diarrhœa and enteretis, 115. The health of the city is unusually good, considering the season and the intense heat.

PHILIPPINE ISLANDS—*Manilla.*—The United States consul in his dispatch to the Department of State under date of June 3, 1889, says:

I have to report the prevalence of the Asiatic cholera in Manilla and Iliolo, and inclose herewith a copy of a dispatch from the consular agent at Iliolo, giving a report of the situation at the latter port.

In Manilla the deaths have averaged 20 per day during the past month, among them three foreign residents and one American seaman, but at no time has the disease been considered epidemic, and although all vessels leaving here for the Philippine provinces are quarantined for ten days at Mariveles, the quarantine station on the opposite side of Manilla Bay, 27 miles from this port, there has been no official declaration that the port is considered infected.

All bills of health issued at this consulate to vessels bound to the United States during the past month have contained a statement of the reported prevalence of cholera. This practice will continue until the disease has entirely disappeared.

UNITED STATES CONSULAR AGENCY
Iliolo, May, 26, 1889.

SIR: On the 21st instant, in reply to a letter addressed to the governor of Iliolo, I received that of which the following is a translation, viz: "Replying to your communication of to-day's date, I have the pleasure of making known that in this town there have been noticed, since the 13th instant, various cases of a suspicious sickness with the characteristics of cholera, and thus in this same form it will be noted in the 'patentes' of vessels sailing for the present," &c.

I beg, therefore, to advise you of the presence of cholera in this port. The number of cases daily is not known generally, but it is understood that for the past ten days the deaths have ranged from 10 to 30 daily.

I have made note of same on 'patentes' of vessels sailing for the United States.

To the present time no cases have occurred among the foreigners or vessels in the bay.

I am, sir, your obedient servant,

C. T. TYLER.
United States Consular Agent.

A. R. WEBB, Esq., *Consul, Manila.*

URUGUAY—*Montevideo.*—Month of April, 1889. Population, 164,028. Total deaths, 414, including small-pox, 1; enteric and typhus fever, 17, and diphtheria, 19. The sanitary condition of the city was good.

MEXICO—*Tampico.*—The following letter has been received from Acting Assistant-Surgeon J. M. Main, Marine-Hospital Service, Brownsville, Tex.:

July 8, 1889. Your telegrams received and answered. Have called upon Vice-Consul Vallo, of Matamoras. He informed me that no information of the presence of yellow fever in Tampico had been received by him. I telegraphed Consul-General Sutton, of New Laredo, and was answered by Vice Consul-General Mayes that no knowledge of yellow fever in Tampico had come to him, and that Tampico was attached to his department.

Also the following telegram from Dr. R. Rutherford, at Austin, Tex.:

July 9. No fever as reported at Tampico. Wilkinson can tell you all about it.

Dr. F. J. Combe, acting for the United States Marine-Hospital Service, has been ordered to proceed to Tampico, Mexico, and investigate the reports of yellow fever at that point. The following telegram has been received from him:

San Fernando, Mexico, July 17, 1889.—Just arrived. First telegraph station from Matamoras. Nothing new save rumors of four cases of small-pox at El Gallo, Mexico; under control. Leave immediately.

CUBA—*Havana.*—Five hundred and fifty deaths were reported during the month of June, 1889, including yellow fever, 49; enteric fever, 21; pernicious fever, 26; billious fever, 1; paludal fever, 4; croup, 8; small-pox, 2, and glanders, 2.

Fifteen deaths from yellow fever were reported during the week ended July 6, 1889.

NEW PROVIDENCE—*Nassau.*—June 29, 1889. City very healthy at present. Much rain.

July 6, 1889. City is healthy for this season of the year. Hot and rainy.

WEST INDIES—*Barbadoes.*—June 29, 1889. Health of island good.

UNITED STATES OF COLOMBIA—*Colon.*—A telegram to the Department of State from the United States Consul under date of July 16, states that yellow fever has appeared at Colon.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	June 29	5,642,015	1,599	.....	.....	.....	.....	8	16	18	38	.....
Paris	June 29	2,260,945	878	.....	.....	.....	.....	16	6	27	26	15
Glasgow	June 29	545,678	219	.....	.....	.....	.....	1	3	2	.....	15
Warsaw	June 22	445,770	320	.....	.....	6	.....	.....	3	5	.....	.....
Calcutta	June 1	433,219	194	25	.....	1	.....	.....	.....	.....	1	.....
Amsterdam	June 29	399,051	194	.....	.....	.....	.....	1	.....	3	.....	.....
Copenhagen	June 22	307,000	132	.....	.....	.....	.....	1	.....	10	.....	.....
Rio de Janerio	May 19	300,000	391	.....	16	3	6	1	.....	1	.....	.....
Rio de Janerio	May 26	300,000	387	.....	12	2	5	1	.....	.....	.....	.....
Munich	May 18	281,000	169	.....	.....	.....	.....	1	2	5	.....	.....
Munich	May 25	281,000	170	.....	.....	.....	.....	1	1	4	.....	.....
Munich	June 1	281,000	196	.....	.....	.....	.....	1	3	8	.....	.....
Munich	June 8	281,000	177	.....	.....	.....	.....	1	5	6	.....	.....
Munich	June 15	281,000	183	.....	.....	.....	.....	.....	2	13	.....	.....
Palermo	June 29	250,000	87	.....	.....	.....	.....	2	2	3	.....	.....
Rotterdam	June 29	197,724	123	.....	.....	.....	.....	.....	.....	2	16	.....
Martinique	June 29	165,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trieste	June 15	154,500	52	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stuttgart	June 29	125,510	45	.....	.....	.....	.....	.....	.....	.....	3	.....
Pernambuco	June 11	120,000	105	.....	.....	.....	1	1	2	.....	.....	.....
Pernambuco	June 18	120,000	74	.....	.....	.....	1	2	3	.....	.....	.....
Mayence	June 15	65,802	35	.....	.....	.....	.....	.....	2	2	.....	.....
Mayence	June 22	65,802	36	.....	.....	.....	.....	.....	1	3	.....	.....
Guayaquil	Mar. 18	30,000	87	.....	5	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Mar. 25	30,000	79	.....	3	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Apr. 1	30,000	73	.....	1	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Apr. 8	30,000	81	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Apr. 15	30,000	88	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Apr. 22	30,000	81	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Apr. 29	30,000	101	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	May 6	30,000	78	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	May 13	30,000	90	.....	1	.....	.....	.....	.....	.....	.....	.....
Guayaquil	May 20	30,000	113	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	May 27	30,000	100	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	June 3	30,000	108	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	June 10	30,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	June 17	30,000	104	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	June 23	23,630	11	.....	.....	1	.....	.....	.....	.....	.....	.....
Gibraltar	June 30	23,630	12	.....	.....	1	.....	.....	.....	1	.....	.....
Kingston, Can	July 5	17,300	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	June 21	13,500	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	June 28	13,500	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	June 22	7,428	3	.....	.....	.....	.....	.....	.....	.....	.....	.....

UNITED STATES.

REPORTS OF VESSELS AT NATIONAL QUARANTINE STATIONS—*Cape Charles Quarantine Station, Virginia.*—Week ended July 13, 1889. Fourteen vessels spoken.

Delaware Breakwater Quarantine Station, Delaware.—Week ended July 6, 1889. Ten vessels inspected and passed.

Week ended July 13, eight vessels inspected and passed, and one (the German ship "Friedlander"), from Rio de Janeiro, July 10, was fumigated and disinfected, and departed from quarantine July 12. Acting Assistant Surgeon William P. Orr, in charge of this station, states under date of July 11, that this ship "arrived at this station yesterday, thirty-eight days from Rio de Janeiro, the crew all well. She had six

men sick with yellow fever whilst she was there, and several after she sailed. She has been detained, and after disinfection will be allowed to proceed to port of destination, Philadelphia."

Gulf Quarantine Station, North Chandeleur Island.—Week ended July 6, 1889. Portuguese bark "Julius," reported in Abstract No. 28, left "in quarantine" July 5, for Mobile, Ala.

San Diego Quarantine Station, California.—Week ended July 6, 1889. Two vessels inspected and passed. Acting Assistant Surgeon W. W. McKay, Marine-Hospital Sugeon in charge of this station, writes as follows under date of July 6, 1889:

There is a decided tendency to the frequent occurrance of typhoid and malarial fevers about the vicinity of the Alamo mining district, of which Ensenada, Mexico, is the seaport. My attention has been called to it on encountering four well-marked cases aboard of the steamer "Manuel Dublan," within the last month, all passengers from the above-named place, and am creditably informed that quite a number of cases are at present under the care of the local physicians. There is no particular significance to be attached to these cases, except that they are probably caused by bad sanitary conditions about these mining camps and stirring up the earth. The thought naturally occurs, however, that it would be a favorable soil for "yellow jack" to flourish in, and while the Mexican steamer comes regularly with a clean bill of health, and I do not anticipate the least danger of anything worse, still I feel that it would be well to have a few good tents at hand, or that permission be granted to purchase them should it become necessary. I hope to be able to report at once upon site of quarantine, when I shall have received the reply of Major Adams to mine of the 19th ultimo.

CALIFORNIA—*San Francisco.*—Month of June, 1889.—Population, 330,000. Total deaths, 398, including croup, 3; diarrhœa, 1; diphtheria, 4; dysentery, 1; erysipelas, 2; enteric fever, 9; measles, 1, and scarlatina, 1.

Los Angeles.—Month of June, 1889. Population, 80,000. Total deaths, 63, including enteric fever, 4; diphtheria, 8, croup, 2, and diarrhœal diseases, 8.

Oakland.—Month of June, 1889. Population, 60,000. Total deaths, 63, including croup, 1; diphtheria, 6; diarrhœa, 1; erysipelas, 1, and whooping-cough, 2.

Sacramento.—Month of June, 1889. Population, 30,000. Total deaths, 30, including enteric fever, 2.

COLORADO—*Denver.*—Month of June, 1889. Population, 100,000. Total deaths, 137, including croup, 1; diarrhœa, 4; dysentery, 4; diphtheria, 6; enteric fever, 1, and scarlet fever, 1.

CONNECTICUT.—Reports to the State board of health from 167 towns, having an aggregate population of 756,722, for the month of June,

1889, show a total of 925 deaths, including measles, 12; scarlet fever, 3; diphtheria and croup, 45; whooping-cough, 8; erysipelas, 3; enteric fever, 13; diarrhœa, 75, and consumption, 130.

GEORGIA—*Savannah.*—Month of June, 1889. Population, 57,000. Total deaths, 105, including diarrhœa, 2; dysentery, 2; enteric fever, 1, and measles, 1.

IOWA—*Davenport.*—Month of June, 1889. Population, 33,715. Total deaths, 45, including croup, 3; diphtheria, 10, and diarrhœa, 1.

Dubuque.—Month of June, 1889. Population, 35,000. Total deaths, 24, including diarrhœa, 1.

KENTUCKY—*Louisville.*—Month ending June 29, 1889. Population, 227,000. Total deaths, 328, including croup, 1; cholera nostras, 1; diarrhœa, 1; diphtheria, 3; dysentery, 8; erysipelas, 1; enteric fever, 6, and measles, 6.

MASSACHUSETTS—*Fall River.*—Month of June, 1889. Population, 69,000. Total deaths, 95, including croup, 1; diphtheria, 1, and dysentery, 1.

Worcester.—Month of June, 1889. Population, 82,000. Total deaths, 96, including croup, 2; enteric fever, 1, and whooping-cough, 1.

MISSOURI—*St. Louis.*—Month of June, 1889. Population, 440,000. Total deaths, 600, including scarlet fever, 11; diphtheria, 12; croup, 9; whooping-cough, 2; enteric fever, 8; diarrhœal diseases, 88, and erysipelas, 4.

MICHIGAN.—Week ended July 6, 1889. Reports to the State board of health, Lansing, from 44 observers, indicate that diarrhœa and cholera morbus increased, and bronchitis, intermittent fever, and tonsilitis decreased in area of prevalence. Including reports from regular observers and others, diphtheria was reported present during the week, and since, at 8 places; scarlet fever, at 15 places, and enteric fever at 3 places.

Grand Rapids.—Month of June, 1889. Population, 70,000. Total deaths, 71, including croup 1; and measles, 2.

NEW YORK—*Yonkers.*—Month of June, 1889. Population, 30,193. Total deaths, 46, including scarlet fever, 2, and diarrhœa and cholera morbus, 11.

Rochester.—Month of June, 1889. Population, 130,000. Total deaths, 135, including croup, 1; dysentery, 1; diphtheria, 2; erysipelas, 1; enteric fever, 1, and whooping cough, 5.

RHODE ISLAND—*Newport.*—Month of June, 1889. Population, 22,000. Total deaths, 24, none from contagious diseases. One case of diphtheria reported during the month.

TEXAS—*San Antonio.*—Month of June, 1889. Population, 50,000. Total deaths, 85, including croup, 1; diarrhœa, 3; dysentery, 2; enteric fever, 2, and measles, 2.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y	July 13	1,573,097	1,187	.....	.....	.....	.....	.....	.....	4	10	28	4	12
Philadelphia, Pa	July 13	1,040,245	607	.....	.....	.....	.....	.....	.....	11	1	5	6	6
Chicago, Ill	July 13	830,000	433	.....	.....	.....	.....	.....	.....	3	14	14	3	.....
Baltimore, Md	July 13	500,343	276	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....
San Francisco, Cal	June 28	330,000	85	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
San Francisco, Cal	July 5	330,000	106	.....	.....	.....	.....	.....	.....	5	.....	1	.....	.....
Cincinnati, Ohio	July 13	325,000	138	.....	.....	.....	.....	.....	.....	1	.....	1	11	.....
New Orleans, La	July 6	254,000	122	.....	.....	.....	.....	.....	.....	.....	.....	1	2	2
Cleveland, Ohio	June 1	235,000	58	.....	.....	.....	.....	.....	.....	5	.....	.....	3	.....
Cleveland, Ohio	June 8	235,000	73	.....	.....	.....	.....	.....	.....	3	.....	3	.....	.....
Pittsburgh, Pa	July 13	230,000	122	.....	.....	.....	.....	.....	.....	7	.....	1	3	2
Detroit, Mich	July 6	230,000	78	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Louisville, Ky	July 13	227,000	82	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
Washington, D. C	July 13	225,000	141	.....	.....	.....	.....	.....	.....	4	3	.....	.....	1
Milwaukee, Wis	July 6	210,000	41	.....	.....	.....	.....	.....	.....	2	2	1	.....	.....
Kansas City, Mo	July 13	180,000	59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rochester, N. Y	July 13	130,000	66	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Providence, R. I	July 13	127,000	63	.....	.....	.....	.....	.....	.....	.....	3	1	1	.....
Denver, Colo	July 12	100,000	42	.....	.....	.....	.....	.....	.....	1	1	.....	1	.....
Toledo, Ohio	July 12	83,500	23	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Fall River, Mass	July 13	69,000	44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn	July 13	65,153	21	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....
Lynn, Mass	July 13	50,000	12	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Portland, Me	July 13	42,000	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Manchester, N. H	July 6	42,000	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	June 24	35,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	July 6	35,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal	July 6	32,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y	July 13	30,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y	July 13	26,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass	July 13	25,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I	July 11	22,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass	July 13	21,553	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	July 13	16,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 30. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., July 26, 1889.

Abstract of Sanitary Reports received through the Department of State from foreign countries during the week ended July 26, 1889, and information received through other channels.

(Published in accordance with section 4, act approved April 29, 1878.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended July 6, corresponded to an annual rate of 17.7 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Nottingham, viz., 11.2, and the highest in Newcastle-on-Tyne, viz., 29.2 a thousand. Diphtheria caused 3 deaths in Birmingham, 3 in Salford, 2 in Bristol, 4 in Manchester, 2 in Bradford, and 2 in Newcastle-on-Tyne.

London.—One thousand three hundred and fifty deaths were registered during the week, including measles, 31; scarlet fever, 9; diphtheria, 38; whooping-cough, 32; enteric fever, 8; diarrhœa and dysentery, 155, and 5 from cholera and choleraic diarrhœa. The deaths from all causes corresponded to an annual rate of 16.2 a thousand. Diseases of the respiratory organs caused 143 deaths. In greater London 1,648 deaths were registered, corresponding to an annual rate of 15.2 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 17; whooping-cough, 6, and diphtheria, 5.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended July 6, in the 16 principal town districts of Ireland, was 20.4 a thousand of the population. The lowest rate was recorded in Wexford, viz., 4.3, and the highest in Armagh, viz., 77.5 a thousand. In Dublin 154 deaths were registered, including measles, 2; enteric fever, 1; diarrhœa, 3; scarlet fever, 1, and erysipelas, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended July 6, corresponded to an annual rate of 21.3 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Perth, viz., 15.8, and the highest in Glasgow, viz., 25.7 a thousand. The aggregate number of deaths registered from all

causes was 545, including measles, 26; scarlet fever, 2; diphtheria, 6; whooping-cough, 24; fever, 1, and diarrhœa, 22.

Malta and Gozo.—One hundred and fifty-one deaths were registered from the 1st to the 15th of June, 1889, including measles, 5; small-pox, 1; whooping-cough, 1; enteric fever, 1, and dysentery, 3.

FRANCE—*Bordeaux.*—Month of April, 1889. Population, 240,582. Total number of deaths, 493, including enteric fever, 6; scarlet fever, 2, and diphtheria, 17.

Month of May, 1889. Total deaths, 426, including enteric fever, 6; scarlet fever, 1, and diphtheria, 11.

Month of June, 1889. Total deaths, 361, including enteric fever, 5; scarlet fever, 3, and diphtheria and tonsillitis, 8.

ARGENTINE REPUBLIC—*Buenos Ayres.*—Month of April, 1889. Total number of deaths reported, 1,296, including small-pox, 5; enteric fever, 64; scarlet fever, 1, and diphtheria, 37. Population, 501,056. The prevailing diseases were enteric fever and diseases of the digestive organs.

CUBA—*Santiago de Cuba.*—The United States consul, under date of July 13, says:

Owing to the changing of the physician of the port, I am enabled only at this late date to give you sanitary report for the district of Santiago de Cuba for the last half of June.

Owing to great heat, continuous rain, and sudden changes of temperature, the diseases predominant during last half of June were paludic fevers and dysentery. The number of cases of measles has comparatively diminished. The twelve cases and two deaths of small-pox and varioloid occurred at the town of San Luis, some 27 miles from here. The city and port are entirely free from contagious diseases. The two cases and one death from yellow fever occurred at military hospital outside of town limits. Inclosed please find detailed list of cases and deaths and diseases causing them.

Health Statistics of District of Santiago de Cuba during last half of June, 1889.

	Cases.	Deaths.		Cases.	Deaths.
Small-pox and varioloid, San Luis	12	2	Acute hepatitis	4	1
Chronic alcoholism	2	2	Hepatic abscess	1	1
Measles	24	.....	Meningitis	3	3
Dysentery	30	1	Croup	2	2
Consumption	10	6	Anginæ diversæ	5	1
Yellow fever, at Military Hospital	2	1	Acute rheumatism	10	1
Pernicious fever	15	9	Cerebral affections	5	2
Remittent fever	20	.....	Burns	1	1
Bronchitis	10	.....	Tabes mesenteric	10	10
Enteritis	5	.....	Bright's disease	2	2
Hypertrophy of heart	5	2	Tetanus	2	1
Pneumonia	2	.....	Fatty degeneration of the heart	2	2
Congestion of lungs	1	1	Syphilis	9	2
Delirium tremens	1	1			
Cancer of stomach	1	1	Total	198	56
Cancer of uterus	2	1			

BRAZIL—*Ceara.*—Month of May, 1889. Population, 29,000. Total deaths, 290; none from contagious diseases. Sanitary condition of city good.

Bahia.—The United States consul, in his dispatch dated June 22, 1889, says: "I have the honor to report the health of this city good since my last dispatch on this subject, dated May 31. Rain has fallen in abundance during the last two weeks."

MEXICO—*Guaymas.*—Twenty-four deaths were reported during the month of June, 1889. No disease is epidemic. Sanitary condition of port good.

Acapulco.—Twenty-one deaths were reported during the month of June, 1889, including small-pox, 4, and diarrhœa, 2.

LIBERIA—*Monrovia.*—The United States consul-general reports to the Department of State, under date of June 1, 1889, as follows: "I have the honor respectfully to inform you that cases of small-pox are reported to exist in New Georgia, a distance of some three miles east from Monrovia. Two deaths, so far, are said to have occurred from the effects of the disease. The American bark 'Monrovia,' of New York, H. J. Rogers, master, cleared on the 28th ultimo with a 'clean' bill of health, no official report having reached this office."

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	July 6	5,642,015	1,648	.....	.....	1	.....	8	10	43	34	.....
Paris	July 6	2,260,945	907	.....	.....	3	.....	11	1	39	16	11
Glasgow	July 6	528,144	261	.....	.....	.....	.....	1	.....	1	13	18
Amsterdam	July 6	399,051	198	.....	.....	.....	.....	.....	.....	3	.....	.....
Copenhagen	June 29	307,000	128	.....	.....	.....	.....	1	1	6	.....	.....
Rio de Janeiro	June 9	300,000	393	.....	13	5	7	4	.....	1	.....	.....
Rio de Janeiro	June 16	300,000	392	.....	7	4	8	6	.....	1	.....	.....
Edinburgh	June 15	266,900	93	.....	.....	.....	.....	.....	.....	1	.....	.....
Edinburgh	June 22	266,900	92	.....	.....	.....	.....	.....	2	.....	.....	.....
Trieste	June 22	154,500	55	.....	.....	.....	.....	.....	.....	1	.....	.....
Trieste	June 29	154,500	56	.....	.....	.....	.....	.....	1	1	.....	.....
Stuttgart	July 6	125,510	51	.....	.....	.....	.....	.....	.....	.....	.....	.....
Havre	June 29	112,074	59	.....	.....	1	.....	2	1	1	.....	.....
Barmen	June 29	109,000	60	.....	.....	.....	.....	.....	.....	1	4	.....
Barmen	July 6	109,000	52	.....	.....	.....	.....	.....	.....	1	2	.....
Leghorn	June 30	103,142	31	.....	.....	.....	.....	.....	.....	1	.....	.....
Leith	June 15	76,400	29	.....	.....	.....	.....	1	.....	.....	.....	.....
Leith	June 22	76,400	36	.....	.....	.....	.....	.....	1	.....	.....	.....
Mayence	June 29	65,802	19	.....	.....	.....	.....	.....	.....	1	.....	.....
Cadiz	June 29	65,082	38	.....	.....	.....	.....	.....	.....	.....	.....	.....
Curaçao	July 6	25,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	July 4	23,800	25	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	July 11	23,800	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	June 29	20,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	July 8	20,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	July 12	17,300	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	June 29	7,428	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	July 6	7,428	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	June 17	1,200	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	June 24	1,200	2	.....	.....	.....	.....	.....	.....	.....	.....	.....

FUMIGATING STEAMERS FOR THE QUARANTINE SERVICE.—The contractors, The Pusey & Jones Company of Wilmington, Del., successfully launched the first of the fumigating steamers, built for this Bureau, on Wednesday of last week. The vessel is 80 feet long on the water-line; beam, 16 feet 6 inches; depth of hold 6 feet 10 inches, and her draught of water is 4 feet 9 inches.

Her hull is of iron, and she is provided with a new sulphur-furnace, designed by Assistant Surgeon Kinyoun, and tanks for bichloride of mercury solution. The vessel was designed by Captain Geo. W. Moore, United States Revenue Marine, and her machinery by Mr. Chas. E. Emery. She has been named the "Louis Pasteur," and when completed will be sent to the Gulf Quarantine at Chandeleur Island. There are two others being built from the same design, to be named respectively the "Robert Koch" and the "William H. Welch."

REPORTS OF VESSELS AT NATIONAL QUARANTINE STATIONS—*Cape Charles, Va.*—Week ended July 19. Fourteen vessels spoken, and three boarded, inspected, and passed.

Delaware Breakwater.—Week ended July 20. Fourteen vessels inspected and passed, and one (the American schooner "M. Walls," from Matanzas, arrived July 17, awaiting orders, with a cargo of sugar) with a case of gastric enteritis, detained three days for observation. Departed July 20, 1889. Condition of vessel and crew good.

South Atlantic (Sapelo).—Week ended July 13. Norwegian bark "Mida" arrived July 7 from Santos for Savannah. Cargo of stone (ballast), condition of vessel fairly clean. Crew of 9, all well. One death from yellow-fever on voyage. No sickness on arrival. Vessel fumigated after removal of ballast, and bilges washed with bichloride solution. Still held in quarantine.

Gulf Quarantine, North Chandeleur Island.—Week ended July 13. Norwegian bark "Prince Regent" arrived July 9 from Rio de Janeiro; destination Ship Island. Rock ballast. Vessel very clean. Forecastle and between decks newly painted. Condition of cargo (rock ballast), good. Crew of 19, all well in Rio. One man, sick on passage, said to have consumption, discharged at Barbadoes. Clean bill of health from that place. Held for disinfection.

San Diego, Cal.—Week ended July 13. Steamer "Manuel Dublan" arrived July 7, with two passengers sick with enteric fever, one of them being a very bad case, with profuse epistaxis on the voyage from Ensenada, Mexico. Both passengers were from the Alamo mining district. State-room and cabin were thoroughly cleansed and dis-

infected, and vessel discharged. The same vessel, which carries passengers from Ensenada and San Quentin, Mexico, was also inspected on her subsequent trips of the 10th and 13th instant.

ALABAMA—*Mobile.*—Month of June, 1889. Population, 40,000. Total deaths, 76, including whooping-cough, 1; erysipelas, 1; enteric fever, 2; diarrhœa, 2, and dysentery, 5.

CALIFORNIA.—Reports to the State board of health from eighty towns, with an estimated population of 728,700, give a total mortality of 854, which is an exceptionally small death rate. The deaths include diarrhœa and dysentery, 23; diphtheria, 26; croup, 6; whooping-cough, 3; scarlet fever, 5; measles, 2; enteric fever, 31, and erysipelas, 4.

CONNECTICUT—*New Haven.*—Month of June, 1889. Population, 85,000. Total deaths, 137, including enteric fever, 1; whooping-cough, 1; diphtheria and croup, 10, and diarrhœal diseases, 26.

ILLINOIS—*Jacksonville.*—Month of June, 1889. Population, 10,927. Total deaths, 10, including diphtheria, 2, and enteric fever, 2.

MICHIGAN.—Week ended July 13, 1889. Reports to the State board of health, Lansing, indicate that cholera infantum and erysipelas increased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week, and since, at seven places; scarlet fever, at nine places, and enteric fever at four places.

Detroit.—Month of June, 1889. Population 230,000. Total deaths, 210, including croup, 2; diarrhœa, 3; diphtheria, 7; erysipelas, 1; enteric fever, 1; measles, 1; whooping-cough, 3, and scarlet fever, 1.

MINNESOTA—*Minneapolis.*—Month of June, 1889. Total deaths, 174, including enteric fever, 6; diphtheria, 8; measles, 1; scarlet fever, 5, and erysipelas, 3.

VIRGINIA—*Petersburg.*—Year ending June 26, 1889. Population, 25,000. Total deaths, 505, including enteric fever, 5; dysentery, 17; diarrhœa, 6; croup, 2; croupous diphtheria, 1; erysipelas, 1, and diphtheria, 3.

The following publications have been received:

Monthly Bulletin of the Iowa State Board of Health, July, 1889.

State Board of Health Bulletin, Tennessee, July 15, 1889.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	July 20	1,573,995	964	.....	.....	.....	.....	.....	.....	5	7	20	4	15
Philadelphia, Pa.	July 20	1,040,245	536	.....	.....	.....	.....	.....	.....	17	4	2	5	5
Brooklyn, N. Y.	July 20	834,607	412	.....	.....	.....	.....	.....	.....	2	2	12	.....	4
Baltimore, Md.	July 20	500,343	240	.....	.....	.....	.....	.....	.....	2	2	.....	.....	2
San Francisco, Cal.	July 12	350,000	101	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Cincinnati, Ohio.	July 20	325,000	138	.....	.....	.....	.....	.....	.....	1	.....	5	7	1
New Orleans, La.	July 13	254,000	121	.....	.....	.....	.....	.....	.....	.....	.....	1	1	.....
Cleveland, Ohio.	June 15	235,000	86	.....	.....	.....	.....	.....	.....	3	4	4	1	1
Cleveland, Ohio.	June 22	235,000	64	.....	.....	.....	.....	.....	.....	2	1	3	.....	.....
Detroit, Mich.	July 13	230,000	107	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Pittsburgh, Pa.	July 20	230,000	104	.....	.....	1	.....	.....	.....	2	.....	2	.....	1
Washington, D. C.	July 20	225,000	133	.....	.....	.....	.....	.....	.....	8	.....	4	.....	3
Minneapolis, Minn.	July 13	200,000	75	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....
Minneapolis, Minn.	July 20	200,000	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newark, N. J.	July 2	184,669	95	.....	.....	.....	.....	.....	.....	3	1	4	.....	3
Newark, N. J.	July 9	184,669	124	.....	.....	.....	.....	.....	.....	.....	.....	7	1	1
Newark, N. J.	July 16	184,669	128	.....	.....	.....	.....	.....	.....	2	.....	2	2	.....
Kansas City, Mo.	July 20	180,000	58	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Rochester, N. Y.	July 20	130,000	55	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Providence, R. I.	July 20	127,000	59	.....	.....	.....	.....	.....	.....	.....	.....	1	1	3
Denver, Colo.	July 19	100,000	31	.....	.....	.....	.....	.....	.....	3	1	2	.....	.....
Richmond, Va.	July 15	100,000	59	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Richmond, Va.	July 22	100,000	55	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Toledo, Ohio.	July 19	83,500	20	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	2
Fall River, Mass.	July 20	69,000	44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn.	July 20	65,153	21	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Charleston, S. C.	July 13	60,145	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Charleston, S. C.	July 20	60,145	47	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	July 20	50,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	July 20	42,000	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	July 13	42,000	16	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Galveston, Tex.	July 5	40,000	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa.	July 13	35,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	July 13	32,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	July 20	30,000	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	July 13	30,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	July 20	30,000	15	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Auburn, N. Y.	July 20	26,000	15	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Haverhill, Mass.	July 20	25,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	July 18	22,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	July 20	21,553	7	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Rock Island, Ill.	July 15	16,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa.	July 20	16,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	July 13	15,000	8	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....
Pensacola, Fla.	July 20	15,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 31. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., August 2, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended August 2, 1889, published in accordance with section 4, Act of Congress, approved April 29, 1878.

UNITED STATES.

Reports from National Quarantine Stations.

CAPE CHARLES, VA.—Week ended July 26, 1889. Two vessels boarded, inspected, and discharged. Eleven vessels spoken.

DELAWARE BREAKWATER, DEL.—Week ended July 27, 1889. Fourteen vessels inspected and passed. Seven vessels spoken.

SOUTH ATLANTIC (SAPELO), GA.—Week ended July 20, 1889. Norwegian bark "Mida" discharged from quarantine July 15, 1889.

GULF QUARANTINE (NORTH CHANDELEUR ISLAND), LA.—Week ended July 20, 1889. Norwegian bark Prince Regent, before reported, still held in quarantine.

SAN DIEGO, CAL.—Week ended July 20, 1889. Two vessels inspected and passed.

Reports upon Suspicious Fevers.

Reports of suspicious fevers at the following named localities have been investigated during the week by sanitary inspectors of the Marine-Hospital Service and others, with results as stated:

Dr. R. Rutherford, State health officer of Texas, forwards the following:

Brownsville, July 30.—I attended Greenwood in his last illness. He died of bilious remittent fever, congestive type.

C. B. COMBE.

[For report of Sanitary Inspector, United States Marine-Hospital Service, upon rumored prevalence of yellow fever at Tampico, Mexico, see foreign reports—Mexico.]

Gainesville, Fla., July 27.—No dengue fever here. There have been some cases of typhoid and typho-malarial fever.

J. L. POSEY, M. D.,
Sanitary Inspector, United States Marine-Hospital Service.

Brunswick, Ga., July 31.—The cause of death of B. Nightingale, which occured July 24, was hemorrhagic malarial fever. Confirmed by autopsy held by Doctors Dunwoody, Burford, and Hazlehurst. No cases of fever here of a suspicious character.

J. L. POSEY, M. D.,
Sanitary Inspector, United States Marine-Hospital Service.

Jacksonville, Fla., July 26.—Porter says rumor is false of dengue in Fernandina.

R. P. DANIELS, M. D.,
President Florida State Board of Health.

CEDAR KEYS, FLA.—By request of the State health officer of Florida, a Spanish smack which was seized for alleged violation of the customs regulations at Cedar Keys, has, by order of the Secretary of the Treasury, been sent to Key West quarantine station, Dry Tortugas, for disinfection.

PITTSBURGH, PA.—Passed Assistant Surgeon P. M. Carrington, Marine-Hospital Service, reports as follows under date of July 31, 1889:

I have to report the occurrence of a second case of small-pox (varioloid) at the Mercy Hospital. The patient, who was a nurse in the marine ward, has been taken to the Municipal Hospital, his room disinfected, and all patients vaccinated.

JACKSONVILLE, FLA., *July* 29, 1889.

SIR: In obedience to telegraphic orders received July 24, I proceeded to Gainesville, Fla., arriving at 9 P. M., July 25. On the morning of the 26th I called upon the Mayor, J. B. Brown, Dr. T. J. McMillan, city health officer, Doctors Phillips, McKinstry, and Lancaster, prominent practitioners of the city. After an interview with each of these gentlemen, I was thoroughly satisfied that the alleged existence of an epidemic of dengue fever was without foundation. In fact, at the time of my visit, these gentlemen had no cases of fever on their visiting lists. The rumor originated from the fact that during the past two weeks there have been an unusual number of cases of continued fevers of typhoid and typho-malarial type, doubtless due to the protracted drought which has prevailed throughout the State, and to the general use of water derived from bored wells and surface wells, which, owing to the porous character of the soil and the existence of the open-closet system, become more or less contaminated with organic material. Dr. McKinstry treated the larger number of these fevers, some of which were typical typhoid, and the others of malarial character. There were two deaths.

I was invited by Doctor Lancaster to visit the only case of fever under his treatment, which at that date was found in accordance with his diagnosis to be of typho-malarial character. The prompt and candid line of action pursued by the physicians of Gainesville last September,

in immediately announcing the first cases of yellow fever, which subsequently became epidemic, gives a perfect assurance and the best guarantee that they are not "of those who are willing to sacrifice the lives and interests of their community by following the methods of duplicity and the policy of concealment which proved so disastrous last year." I am aware that you will receive many vague and groundless rumors during the coming month, and realize that a prompt investigation is the most certain method of establishing their truth or falsity, thus allaying the easily excited fears in the public mind, so prone to panic on account of past unfortunate experiences. The health authorities of Gainesville have requested me to convey to you their full appreciation of the services rendered their city by the Marine-Hospital Service, and express themselves in full accord with the efforts made by the National and State authorities to maintain the public health of Florida.

Respectfully yours,

J. L. POSEY,

Sanitary Inspector, Marine-Hospital Service.

To Surgeon-General J. B. HAMILTON.

Tabular Statement of Mortality in Florida, as Reported by the State Board of Health, for May, 1889.

CAUSE OF DEATH.	Total.	Duval County.	Escambia County.	Franklin County.	Gadsden County.	Jefferson County.	Lake County.	Leon County.	Marion County.	Monroe County.	Orange County.	Polk County.	Putnam County.	St. John County.
Abscess of liver	2	2												
Abscess of spleen	1									1				
Accidental death	3	3												
Alcoholism	1		1											
Apoplexy	5		2						1	2			1	
Bright's disease	1		1											
Bronchitis	1	1												
Cancer	2							1		1				
Child-birth	2								2					
Cholera infantum	12	3	2							1				6
Cirrhosis of liver	1		1											
Congenital distortion of cranium	1									1				
Congestion of brain	1					1								
Congestion of lungs	2	1	1											
Congestive chill	1										1			
Convulsions	4	3								1				
Debility	3		2	1										
Defective vitality	1									1				
Dentition	5	3								2				
Diarrhœa	5	4										1		
Dropsy	3	2											1	
Dysentery	7	1	1						3	2				
Enteritis	5	2								3				
Entero colitis	1						1							
Erysipelas	4	1	1							2				
Fever—enteric	3	2	1											
intermittent	2						2							
puerperal	1	1												
remittent	4	1	1		1					1				
simple continued	1									1				
typho-malarial	3	2								1				
typhus	1									1				
Fracture of skull	1		1											
Gastritis	2	2												
Hemorrhage from lungs	1									1				
Heart disease	4	2				1							1	
Hepatitis	1									1				
Hernia, strangulated	1									1				
Hydrocephalus, chronic	1		1											
Hypertrophy of heart	1									1				
Inanition	1									1				
Inflammation of brain	2												2	
Marasmus	11	5								4				2
Measles	1			1										
Meningitis	6	1								5				
Nephritis	3	3												
Old age	6	2							3				1	
Paralysis	1								1					
Pericarditis—puerperal	2								1	1				
rheumatic	1		1											
Pertussis	3	3												
Phthisis pulmonalis	20	7					3		2	4		1		3
Pneumonia	8	3								2				3
Premature birth	2	1	1											
Pyæmia	1													1
Scorbutus	1									1				
Softening of brain	1		1											
Spasm	1		1											
Still-born	1								1					
Tabes mesenterica	2									2				
Tetanus	4									3				1
Tuberculosis, intestinal	1	1												
Tumor of abdomen	1	1												
Unknown	4	1					2						1	
Uræmia	1	1												
Whooping-cough	6		1						4				1	
Worms	1	1												
Wound, bullet	1								1					
Grand total	194	66	21	2	1	2	8	1	18	48	1	2	8	16

FLORIDA—VITAL STATISTICS.

Tabular Summary extracted from the report of the Florida State Board of Health for the month of May, 1889.

Name of county.	Population (estimated).	Births.	Marriages.	Deaths.	General sanitary condition.	Sanitary condition of public premises.	Sanitary condition of private premises.	Institutions reported.		
								No. of occupants.	Sanitary condition.	Deaths.
Dade	400	0	0	0	Good.	Not stated.	Good.			
Duval—Jacksonville	30,000	Not stated.	21	66	Do.	*Good.	Very good.			
Escambia—Pensacola	15,000	6	21	21	Do.	Do.	Fair.			
Franklin—Apalachicola	3,000	2	2	2	Do.	Do.	Do.			
Gadsden—										
Chattahoochee insane asylum								268	Not stated.	1
Jefferson—Monticello	1,500	5	0	2	Good.	Good.	Excellent.			
Lake—	10,000	7	6	6						
Leesburg					Very good.	Good.	Very good.			
Lee—Fort Myers	700	Not stated.	Not stated.	0	Good.	Fair.	Do.			
Leon—Tallahassee	2,362	3	8	3	Do.	Good.	Excellent.			
West Florida Seminary								42	Good.	Not stated.
Manatee—Manatee Village					Good.					
Marion—Orange Springs	500	0	0	0	Not stated.	Not stated.	Not stated.			
Anthony	235	1	0	0	Good.	Do.	Do.			
Belleview	200	0	0	0	Do.	Do.	Do.			
Summerfield	600	6	1	1	Not stated.	Do.	Do.			
Precincts of Lake Weir and Staunton	Not stated.	0	1	0	Do.	Do.	Do.			
Santos	200	0	0	0	Do.	Do.	Do.			
Ocala	3,000	2	3	6	Good.	Good.	Excellent.			
Hendrick	239	3	0	1	Not stated.	Not stated.	Not stated.			
Broadman	600	2	2	1	Do.	Do.	Do.			
Fort McCoy	500	0	0	1	Do.	Do.	Do.			
Welshton	65	0	0	0	Do.	Do.	Do.			
North Lake Weir	453	4	0	1	Do.	Do.	Do.			
Fellowship	250	2	0	2	Do.	Do.	Do.			
Silver Springs Park	128	0	0	0	Fair.	Do.	Do.			
Leroy and Cottonplant	600	5	1	2	Not stated.	Do.	Do.			
Blue Spring	42	0	0	0	Do.	Do.	Do.			
Precinct of Spau	500	1	3	0	Do.	Do.	Do.			
Flemington	284	0	1	1	Do.	Do.	Do.			
Precinct of Lake Carr	200	1	0	2	Do.	Do.	Do.			
Reddick	50	0	0	0	Do.	Do.	Do.			
Monroe—Key West	25,000	23	31	48	Good.	Good.	Good.			
Orange—Sanford	3,000	Not stated.	Not stated.	Not stated.	Do.	Do.	Do.			
South Florida R. R. hospital								Not stated.	Not stated.	1
Polk—Fort Meade	500	Not stated.	Not stated.	1	Good.	Not stated.	Not stated.			
Lakeland	700	Do.	Do.	1	Do.	Do.	Do.			
Putnam—	12,000	Do.	13	8	Not stated.	Do.	Do.			
Palatka					Good.	Do.	Do.			
St. John—	11,500	Not stated.	13	16	Do.	Do.	Do.			
St. Augustine Institution for Deaf and Blind								22	Fair.	0
Suwanee—										
Convict camp, Live Oaks								405	Good.	0
Volusia—Ormond	300	1	0	0	Good.	Not stated.	Not stated.			

*With the exception of water-front, and marshes bounding river and creeks.

NOTE.—The following counties are reported as making no returns: Alachua, Baker, Bradford, Brevard, Calhoun, Citrus, Clay, Columbia, Gadsden, Hamilton, Hernando, Hillsborough, Holmes, Jackson, La Fayette, Levy, Liberty, Madison, Nassau, Osceola, Pasco, Santa Rosa, Sumter, Suwannee, Taylor, Wakulla, Walton, Washington.

IOWA—*Des Moines.*—Month of June, 1889. Population, 55,000. Total deaths, 34, including croup, 1; diarrhœa, 1; diphtheria, 1; erysipelas, 1, and measles, 1.

MASSACHUSETTS—*Newton.*—Month of June, 1889. Population, 21,553. Total deaths, 33, including diphtheria, 3.

MICHIGAN.—Reports to the State board of health, Lansing, from 58 observers, for the week ended July 20, 1889, indicate that diarrhœa, bronchitis, cholera morbus, comsumption of lungs, neuralgia, rheumatism, and dysentery increased, and remittent fever decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week, and since, at fifteen places; scarlet fever at nine places; enteric fever at six places, and measles at three places.

MISSOURI—*St. Louis.*—Month of June, 1889. Population 440,000. Total deaths, 712, including scarlet fever, 11; diphtheria, 12; croup, 9; whooping-cough, 2; enteric fever, 8, and erysipelas, 4.

NEBRASKA—*Omaha.*—Month of May, 1889. Total deaths, 69, including diphtheria, 1; enteric fever, 2; rabies, 1, and whooping-cough, 1.

Month of June, 1889. Totals deaths, 99, including diarrhœa, 6; scarlet fever 2; enteric fever, 1, whooping-cough, 1.

NEW JERSEY—*Hudson County.*—Month of June, 1889. Population, 282,254. Total deaths 604, including measles, 8; scarlet fever, 11; diphtheria, 26; whooping-cough, 11, and enteric fever, 5.

The following-named publications have been received:

Official Bulletin No. 7 of the State Board of Health of Pennsylvania, Johnstown, Pa.

Report of the Department of Health, city of Chicago, for the year 1888.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	July 27	1,574,893	904	.....	.....	.....	.....	.....	.....	10	6	27	6	12
Chicago, Ill.	July 27	1,100,000	.....	.....	.....	.....	.....	.....	.....	6	3	10	5	1
Philadelphia, Pa.	July 27	1,040,245	471	.....	.....	.....	.....	.....	.....	19	3	6	.....	4
Brooklyn, N. Y.	July 27	834,607	356	.....	.....	.....	.....	.....	.....	6	3	8	2	8
Baltimore, Md.	July 27	500,343	191	.....	.....	.....	.....	.....	.....	1	1	1	.....	2
Cincinnati, Ohio.	July 27	325,000	111	.....	.....	.....	.....	.....	.....	6	1	3	5	.....
New Orleans, La.	July 20	254,000	169	.....	.....	.....	.....	.....	.....	.....	.....	3	2	.....
Detroit, Mich.	July 20	230,000	104	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Washington, D. C.	July 27	225,000	97	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	.....
Minneapolis, Minn.	July 27	200,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newark, N. J.	July 23	184,669	122	.....	.....	.....	.....	.....	.....	1	1	5	2	1
Newark, N. J.	July 30	184,669	108	.....	.....	.....	.....	.....	.....	2	.....	2	3	1
Providence, R. I.	July 27	127,000	63	.....	.....	.....	.....	.....	.....	1	1	3	.....	1
Rochester, N. Y.	July 27	130,000	58	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Denver, Colo.	July 26	100,000	33	.....	.....	.....	.....	.....	.....	2	2	.....	.....	.....
Toledo, Ohio.	July 26	83,500	16	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Fall River, Mass.	July 27	69,000	31	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Nashville, Tenn.	July 27	65,153	18	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1
Charleston, S. C.	July 27	60,145	59	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynn, Mass.	July 27	50,000	18	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Manchester, N. H.	July 20	42,000	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Portland, Me.	July 27	42,000	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	July 12	40,000	19	.....	.....	.....	.....	.....	.....	2	.....	.....	1	.....
Galveston, Tex.	July 19	40,000	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1
Council Bluffs, Iowa.	July 22	35,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa.	July 29	35,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	July 27	30,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	July 27	26,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	July 27	25,000	11	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Newton, Mass.	July 27	21,553	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa.	July 27	16,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	July 28	16,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended July 13, corresponded to an annual rate of 21.5 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Wolverhampton, viz., 14.5, and the highest in Newcastle-on-Tyne, viz., 31.8 a thousand. Diphtheria caused 3 deaths in Manchester.

London.—One thousand six hundred and six deaths were registered during the week, including measles, 30; scarlet fever, 9; diphtheria, 25; whooping-cough, 26; enteric fever, 8; diarrhœa and dysentery, 258, and cholera and choleraic diarrhœa, 10. The deaths from all causes corresponded to an annual rate of 19.3 a thouand. Diseases of the respiratory organs caused 158 deaths. In greater London 1,950 deaths were registered, corresponding to an annual rate of 18.0 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 29; whooping-cough, 5, and diphtheria, 6.

Scotland.—The deaths registered in 8 principal towns during the week ended July 13, corresponded to an annual rate of 18.6 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Perth, viz., 9.5, and the highest in Paisley, viz., 23.3 a thousand. The aggregate number of deaths registered from all causes was 476, including measles, 19; scarlet fever, 3; diphtheria, 1; whooping-cough, 24; fever, 7, and diarrhœa, 37.

EGYPT.—The United States agent and consul-general, at Cairo, in his dispatch dated July 7, 1889, says:

In view of the fact that Egyptian rags are quite extensively shipped to the United States, it becomes my duty to inform the Department of State that small-pox is widely prevalent throughout the provinces of Lower Egypt. It exists at Cairo, Ghezeh, Bedrasheen, Mansererah, and a number of other places. A pest hospital has been established on the Island of Roda, in the suburbs of Cairo, for the treatment of persons affected with the contagion, but cases of the disease are secreted, and many are unknown to the health authorities. Such a fact may be readily comprehended when it is stated that the natives have no fear of any disease, however fatal.

CUBA—*Havana.*—Eleven deaths from yellow fever for the week ended July 19, and 16 for the week ended July 26, 1889.

Cardenas.—July 19, 1889. Weather as usual at this season. Rains nearly every day. Health of town and port good.

BRAZIL—*Paramaribo.*—Month of May, 1889. Population, 27,653. Total deaths 75, including acute diseases of the respirative organs, 7; chronic diseases of the respirative organs, 15; acute diseases of the digestive organs, 10; heart disease, 1; kidney diseases, 2; liver diseases, 3; dropsy, 1; malignant fever, 3; ancylostomasis, 2; apoplexy, 4; convulsions, 2; wound-erysipelas, 1; inflammation of the brain, 1; anæmia, 1; decline, 13; unknown, 9.

BAHAMAS—*Nassau, N. P.*—Week ended July 20, 1889. No diseases of importance. City very healthy. Weather hot and damp.

MEXICO—*Tampico.*—The following telegrams have been received from Dr. F. J. Combe, Sanitary Inspector, United States Marine-Hospital Service:

July 25.—Arrived last night. Consul says no yellow fever. Will investigate further and wire you as soon as possible.

July 29.—Have carefully investigated rumors. Have examined records and interviewed the profession here. No yellow fever. Await instructions.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	July 13	2,200,948	968	.....	.....	2	.....	23	1	24	25	6
Glasgow	July 13	545,678	327	.....	.....	.....	.....	4	1	1	.....	.....
Warsaw	June 29	445,770	325	.....	.....	6	.....	.....	8	11	.....	.....
Warsaw	July 6	445,770	290	.....	.....	3	.....	.....	4	4	.....	.....
Calcutta	June 8	433,219	165	19	.....	.....	.....	.....	.....	.....	.....	.....
Calcutta	June 15	433,219	189	14	.....	1	.....	.....	.....	.....	.....	.....
Copenhagen	July 6	307,000	151	.....	.....	.....	.....	2	3	7	.....	.....
Rio de Janeiro	June 23	300,000	375	.....	11	4	4	5	.....	1	.....	.....
Rio de Janeiro	June 30	300,000	322	.....	7	2	2	4	.....	.....	.....	.....
Palermo	July 6	250,000	116	.....	.....	.....	.....	.....	.....	1	.....	.....
Palermo	July 13	250,000	83	.....	.....	.....	.....	.....	3	3	.....	.....
Rotterdam	July 6	197,724	103	.....	.....	.....	.....	1	.....	.....	6	.....
Rotterdam	July 13	197,724	92	.....	.....	.....	.....	.....	.....	.....	5	.....
Genoa	July 13	180,102	87	.....	.....	2	.....	.....	.....	2	.....	.....
Genoa	June 29	180,102	84	.....	.....	1	1	.....	.....	2	.....	.....
Genoa	July 6	180,102	87	.....	.....	2	.....	.....	.....	2	.....	.....
Toronto	July 20	175,000	21	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stuttgart	July 13	125,510	50	.....	.....	.....	.....	.....	.....	3	.....	.....
Havre	July 6	112,074	47	.....	.....	.....	.....	.....	.....	.....	.....	.....
Havre	July 13	112,074	65	.....	.....	1	.....	1	.....	1	.....	.....
Barmen	July 13	109,000	64	.....	.....	.....	.....	.....	.....	.....	2	.....
Leghorn	July 7	103,142	35	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	July 6	66,802	44	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	June 6	65,028	41	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	July 13	65,028	52	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	June 24	35,000	80	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	July 1	35,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	July 18	23,800	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	July 7	23,631	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	July 19	17,300	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	June 1	15,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	June 8	15,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	June 15	15,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	June 22	15,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	June 29	15,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	July 6	15,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	June 5	5,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	June 12	5,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	June 19	5,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	June 26	5,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 32. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., August 9, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended August 9, 1889, published in accordance with section 4, Act of Congress, approved April 29, 1878.

UNITED STATES.

Reports from National Quarantine Stations.

CAPE CHARLES, VA.—Week ended August 2, 1889. One vessel boarded, inspected, and passed. Eighteen vessels spoken.

DELAWARE BREAKWATER, DEL.—Week ended August 3, 1889. Fifteen vessels inspected and passed. One vessel spoken.

GULF QUARANTINE (NORTH CHANDELEUR ISLAND), LA.—Week ended July 29, 1889. Norwegian bark Prince Regent, previously reported, discharged July 23 in free pratique.

SAN DIEGO, CAL.—Week ended July 27, 1889. Five vessels inspected and passed.

Reports of States, and Yearly and Monthly Reports of Cities.

FLORIDA—*Jacksonville.*—Month of July, 1889. Population, 30,000. Total deaths 62, including diarrhœa, 2; dysentery, 1; enteric fever, 3; remittent fever, 1; typho malarial fever, 2; lung fever, 1, and whooping-cough, 1. General sanitary condition, fair. Sanitary condition of streets, fair. Sanitary condition of premises, fair.

ILLINOIS—*Jacksonville.*—Month of July, 1889. Population, 14,000. Total deaths, 18, including cholera infantum, 8, and dysentery, 1.

MICHIGAN.—Week ended July 27, 1889. Reports to the State board of health, Lansing, from fifty-five observers, indicate that cholera infantum, diarrhœa, and dysentery increased, and rheumatism, pleuritis, and whooping-cough decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week, and since, at seventeen places; scarlet fever, at fourteen places; enteric fever, at nine places, and measles, at five places.

NORTH CAROLINA.—Month of July, 1889. Reports to the State board of health, Wilmington, from twenty-four towns, having an aggregate population of 131,700, show a total of 224 deaths during the month, including enteric fever, 7, and diphtheria, 1.

PENNSYLVANIA—*Williamsport.*—Month of July, 1889. Population, 35,271. Total deaths, 38, including enteric fever, 1. Affections of the gastro-enteric system prevail.

VIRGINIA—*Petersburg.*—Month of July, 1889. Population, 25,000. Total deaths, 70, including enteric fever, 1, and erysipelas, 1.

Publications Received.

Twelfth report of the State board of health of Wisconsin (1888), Madison, Wis., 1889.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Aug. 3	1,575,791	850	.....	.....	.....	.....	.....	.....	13	2	22	1	14
Philadelphia, Pa.	Aug. 3	1,040,245	442	.....	.....	.....	.....	.....	.....	17	3	4	.....	5
Brooklyn, N. Y.	Aug. 3	834,607	399	.....	.....	.....	.....	.....	.....	5	3	15	2	8
Baltimore, Md.	Aug. 3	500,343	203	.....	.....	.....	.....	.....	.....	3	.....	1	.....	1
San Francisco, Cal.	July 26	350,000	84	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....
Cincinnati, Ohio.	Aug. 3	325,000	98	.....	.....	.....	.....	.....	.....	4	.....	6	4	.....
New Orleans, La.	July 27	254,000	137	.....	.....	.....	.....	.....	.....	1	.....	2	2	.....
Cleveland, Ohio.	June 29	235,000	60	.....	.....	.....	.....	.....	.....	2	1	5	.....	.....
Cleveland, Ohio.	July 6	235,000	68	.....	.....	.....	.....	.....	.....	2	1	5	.....	.....
Pittsburgh, Pa.	Aug. 5	230,000	103	.....	.....	.....	.....	.....	.....	14	3	2	2	.....
Detroit, Mich.	July 27	230,000	83	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Louisville, Ky.	Aug. 3	227,000	54	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Washington, D. C.	Aug. 3	225,000	112	.....	.....	.....	.....	.....	.....	2	.....	3	.....	2
Minneapolis, Minn.	Aug. 3	200,000	34	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....
Kansas City, Mo.	July 27	180,000	40	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Rochester, N. Y.	Aug. 3	130,000	75	.....	.....	.....	.....	.....	.....	3	.....	1	.....	.....
Providence, R. I.	Aug. 3	127,000	74	.....	.....	.....	.....	.....	.....	.....	.....	2	1	5
Denver, Colo.	Aug. 2	100,000	42	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Richmond, Va.	July 27	100,000	45	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Toledo, Ohio.	Aug. 2	89,000	26	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1
Fall River, Mass.	Aug. 3	69,000	46	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Nashville, Tenn.	Aug. 3	65,158	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Charleston, S. C.	Aug. 3	60,145	53	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	Aug. 3	50,000	22	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Portland, Me.	Aug. 3	42,000	17	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Galveston, Tex.	July 26	40,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
San Diego, Cal.	July 27	32,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Aug. 3	30,000	8	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Altoona, Pa.	July 27	30,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Aug. 3	26,000	19	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....
Haverhill, Mass.	Aug. 3	25,000	8	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Newport, R. I.	July 25	22,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Aug. 1	22,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Aug. 4	16,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa.	Aug. 3	16,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	July 27	15,000	10	.....	.....	.....	.....	.....	.....	2	.....	.....	2	.....
Pensacola, Fla.	Aug. 3	15,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended July 20, corresponded to an annual rate of 21.0 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz, 12.0, and the highest in Preston, viz, 38.1 a thousand. Diphtheria caused 2 deaths in Manchester, 4 in Birmingham, 3 in Salford, and 2 in Plymouth.

London.—One thousand five hundred and fifty-six deaths were registered during the week, including measles, 29; scarlet fever, 12; diphtheria, 23; whooping-cough, 29; enteric fever, 6; diarrhœa and dysentery, 274, and cholera and choleraic diarrhœa, 10. The deaths from all causes corresponded to an annual rate of 18.7 a thousand. Diseases of the respiratory organs caused 141 deaths. In greater London 1,876 deaths were registered, corresponding to an annual rate of 17.3 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 37; whooping-cough, 10, and diphtheria, 10.

Scotland.—The deaths registered in 8 principal towns during the week ended July 20, corresponded to an annual rate of 19.6 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Aberdeen, viz, 15.0, and the highest in Glasgow, viz, 21.9 a thousand. The aggregate number of deaths registered from all causes was 500, including measles, 18; scarlet fever, 2; diphtheria, 4; whooping-cough, 20; fever, 12, and diarrhœa, 38.

During the month of June 2,041 deaths were registered in these towns. Increase of population being allowed for, this number is 304 below the average for the month of June during the last ten years. The deaths included whooping-cough, 122; enteric fever, 9; measles, 98; diarrhœa and dysentery, 53; diphtheria, 28; scarlet fever, 17, and cholera nostras, 3.

WEST INDIES—*Barbadoes.*—July 15, 1889. Health of island good.

CUBA—*Cardenas.*—July 26, 1889. Warm weather, with rains. Health of town and harbor good.

Havana.—Twenty deaths from yellow fever for the week ended August 3, 1889.

BRAZIL—*Pernambuco.*—Month of June, 1889. Four deaths from beri-beri.

UNITED STATES OF COLOMBIA—*Cartagena.*—July 20, 1889. Two cases of yellow fever amongst the troops in hospital; both recovered. One fatal case, that of an American lieutenant, who arrived sick. No epidemic.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	July 13	5,642,015	1,950	.....	.....	.....	.....	.....	12	31	33	.....
London	July 20	5,642,015	1,876	.....	.....	.....	.....	6	16	33	32	.....
Paris	July 20	2,260,045	987	.....	.....	3	.....	26	3	25	14	17
Glasgow	July 20	545,678	222	.....	.....	.....	.....	7	1	1	.....	.....
Warsaw	July 13	445,770	333	.....	.....	5	.....	.....	7	9	.....	.....
Warsaw	May 4	445,770	215	.....	.....	2	.....	.....	2	6	.....	.....
Calcutta	June 22	433,219	198	22	.....	.....	.....	.....	.....	.....	.....	.....
Rome	May 25	404,449	145	.....	.....	1	.....	1	.....	6	.....	.....
Rome	June 1	404,449	142	.....	.....	.....	.....	3	1	.....	.....	.....
Amsterdam	July 13	399,051	194	.....	.....	.....	.....	.....	.....	3	.....	.....
Amsterdam	July 20	399,051	168	.....	.....	.....	1	2	.....	3	.....	.....
Copenhagen	July 13	397,000	186	.....	.....	.....	.....	.....	2	7	.....	.....
Edinburgh	June 29	266,900	73	.....	.....	.....	.....	.....	2	1	.....	3
Edinburgh	July 6	266,900	89	.....	.....	.....	.....	.....	.....	4	.....	1
Edinburgh	July 13	266,900	85	.....	.....	.....	.....	2	.....	.....	1	1
Palermo	July 20	250,000	78	.....	.....	.....	.....	.....	1	2	.....	.....
Bristol	June 29	229,361	51	.....	.....	.....	.....	1	.....	.....	.....	.....
Bristol	July 6	229,361	68	.....	.....	.....	.....	.....	1	1	.....	.....
Bristol	July 15	229,361	72	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rotterdam	July 20	197,724	110	.....	.....	.....	.....	.....	.....	.....	6	.....
Genoa	July 20	180,124	89	.....	.....	.....	2	.....	.....	1	.....	.....
Trieste	July 6	154,500	74	.....	.....	.....	.....	.....	.....	3	.....	.....
Trieste	July 13	154,500	61	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stuttgart	July 20	125,510	61	.....	.....	.....	.....	.....	.....	1	.....	.....
Pernambuco	June 25	120,000	94	.....	.....	.....	1	2	2	.....	.....	.....
Pernambuco	July 2	120,000	89	.....	.....	.....	.....	1	1	.....	.....	.....
Havre	July 20	112,074	68	.....	.....	1	.....	4	.....	.....	.....	.....
Barmen	July 20	109,000	58	.....	.....	.....	1	.....	.....	.....	2	1
Catania	July 7	108,000	57	.....	.....	1	.....	.....	3	.....	.....	.....
Catania	July 14	108,000	63	.....	.....	.....	.....	.....	2	.....	.....	.....
Catania	July 21	108,000	34	.....	.....	.....	.....	.....	2	2	.....	.....
Leghorn	July 14	103,142	29	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leghorn	July 21	103,142	31	.....	.....	.....	.....	.....	.....	1	.....	.....
Leith	June 29	76,400	27	.....	.....	.....	.....	1	.....	.....	.....	.....
Leith	July 6	76,400	24	.....	.....	.....	.....	.....	1	.....	.....	.....
Leith	July 13	76,400	27	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	July 13	65,802	32	.....	.....	.....	.....	.....	.....	1	.....	.....
Cadiz	July 20	65,028	42	.....	.....	.....	.....	.....	.....	.....	.....	.....
Curaçao	July 20	25,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	July 14	23,631	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	July 13	20,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Col	July 20	20,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	July 26	17,300	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Aug. 2	17,300	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	July 5	13,500	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	July 12	13,500	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	July 13	7,428	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	July 20	7,428	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	July 1	1,250	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	July 8	1,250	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	July 15	1,250	2	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 33. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., August 16, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended August 16, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.

UNITED STATES.

Reports from National Quarantine Stations.

CAPE CHARLES, VA.—Week ended August 9, 1889. Four vessels boarded, inspected, and passed. Forty vessels spoken.

DELAWARE BREAKWATER, DEL.—Week ended August 10, 1889. Five vessels inspected and passed.

SOUTH ATLANTIC (SAPELO) GA.—Week ended August 3, 1889. Norwegian bark Exquis, arrived July 31, from Montevideo, for Savannah, in ballast. Vessel clean. Crew of 8. One sick on arrival, with congestion of liver. Vessel fumigated, and washed with bichloride solution. Captain states that there was ice at Montevideo when he left, July 30. Held in quarantine.

GULF QUARANTINE (NORTH CHANDELEUR ISLAND), LA.—Week ended August 3, 1889. American schooner Connecuh, arrived August 2, from Colon, destination Ship Island, in ballast. Condition of vessel fair. Hold and cabin clean, but forecastle very dirty. Bilge dark, but clean and sweet. Crew of 9. Four sick on arrival, 3 from remittent fever (Chagres), and 1 from simple cholera. Held for disinfection.

Norwegian bark Safir, arrived August 2, 1889, from Rio de Janeiro, destination Ship Island, in ballast (rock). Condition of vessel fairly clean. Bilge clean. Sanitary history doubtful or bad. Crew of 16, all well on arrival. Half of crew sick in Rio with slight fevers (master's statement). From the history 2 were yellow fever, the others were not, or were ephemeral cases. One man shipped in Rio, sick on the voyage, from diarrhœa. He had fever in Rio before shipping, in hospital. None of the crew went to the hospital from ship.

No physician was called, and only one case of sickness was recorded on the log. Held for disinfection.

British bark Olive Mount, arrived August 3, 1889, from Rio de Janeiro. Destination Pensacola, thence to Mobile, and Ship Island. In ballast (rock.) Condition of vessel very good. Exceedingly clean everywhere. Bilge sweet and clean. Crew of 12, all well on arrival. One sick in hospital at Rio. Nature of sickness unknown to master or seamen. The history shows yellow fever. Held for disinfection.

SAN DIEGO, CAL.—Week ended August 3, 1889. One vessel inspected and passed.

PORT TOWNSEND, WASH.—Week ended July 27, 1889. Three vessels spoken.

Week ended August 3, 1889. Ten vessels spoken.

A Menace to Public Health.—Smugglers on the Florida Coast.

PENSACOLA, FLA., *August* 2, 1889.

Surgeon-General JOHN B. HAMILTON:

MY DEAR SIR: The exigency calls for plain speech, I will try to give it to you.

When our legislature was holding its "extra session," and incubating a "State board of health," I gave Senator Parkhill some notes of warning as to the weak points in our sanitary defense, and wished them covered by the statute. It seems that the board has had ample authority to prevent communication with law-breaking people, especially by sea. Imagine my surprise to learn, on this 1st day of August, 1889, that there is no defense or protection *attempted* against the thousand and one smugglers coming from Cuba with aguardiente, textile fabrics, * * * and such *diseases* as a constant state of filth, animal and vegetable, engenders. In every hour of the day some person or persons could be caught smuggling if proper efforts were made. The United States customs department *should* prevent it, but they virtually have but one tub for 600 miles of coast, and she of such draught as to be compelled to keep gunshot away from nine out of ten of the localities used by the smugglers. It is a very poor farce poorly played, "How not to do it."

When they see the smoke of the steamer in the distance they virtuously fish for groupers; when the danger is past they run in and see their friends. You will say this is all talk. No; I saw some of it in March, in the neighborhood of Tampa, and within a week one of my friends sailing up the coast saw five vessels grown so bold as to fish within 2 to 4 miles of the coast, so as to be "handy by" when night came.

One of them landed his cargo at Cedar Keys (without entry), another was bold enough to run in and anchor behind Anclote Key, then proceeded towards Cedar Keys, and was seized by the cutter within 4 miles of the land, *fishing.*

* * * * * * *

A small sailing-vessel, with one rifled howitzer and with a crew of ten determined men, would, in thirty days, knock the dangers clear across the Gulf Stream in the direction of Cuba. Offer a reward of

$100 for every smuggler, $200 for every vessel seized, and the coast would be alive with "Argus-eyes," and *safety* would be assured.

Now, there is in every day that passes some traffic with vessels not six days from Havana or some infected port in Cuba.

"I have kept silent until my bones roared within me," like old Job, and so I open my mouth in order that others may open their eyes. I am full of the proofs of what I utter. I have heard the parties boast of smuggling persons into Florida without health certificates from Spanish authority (and of course without domestic entry). The price received was $100 each for 21 persons, and all was accomplished in twenty-four hours.

Where the profits are large and easy, human nature becomes pliant. I hope this will warn *you* as it has the writer.

Yours, very sincerely,

SEWALL C. COBB.*

For full description of the methods of smugglers from Cuba and the danger of the introduction of yellow fever by this means, see report of Dr. D. M. Burgess, sanitary inspector M.-H. S., at Havana, in Weekly Abstract No. 46, Vol. III, November 16, 1888.

For information showing that the yellow fever epidemic of 1887 and 1888 (in sequence) was introduced into Florida, primarily, by means of a smuggler, see Annual Report U. S. Marine-Hospital Service, 1888, pp. 24 and 25.

For further notice of dangers from this source, see reports of Dr. J. L. Posey, sanitary inspector M.-H. S., from Tampa and Punta Gorda, in Abstracts Nos. 11 and 14, of the current series.

Reports of States, and Yearly and Monthly Reports of Cities.

CALIFORNIA—*Oakland.*—Month of July, 1889. Population, 60,000. Total deaths 44, including diphtheria, 1, and whooping-cough, 4.

Sacramento.—Month of July, 1889. Population, 35,000. Total deaths 28, including enteric fever, 2.

COLORADO—*Denver.*—Month of July, 1889. Population, 100,000. Total deaths 155, including diphtheria, 3; enteric fever, 14; measles, 4; whooping-cough, 1; and scarlet fever, 3.

FLORIDA.—The statistical report of the State board of health for the month of June, 1889, contains the following summary:

Number of counties reported from, 18. Number of cities, towns, or settlements, 61. Number of public institutions reported from, 2. (Institutions of learning closed during the summer months.) Number of births reported, 92. Number of marriages reported, 135. Number of deaths reported, 187.

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*The letter of Mr. Cobb, ex-mayor of Pensacola, has been referred to the Secretary of the Treasury.

ILLINOIS—*Galesburg.*—Month of July, 1889. Population, 17,000. Total deaths, 10. None from contagious diseases.

White Hall.—From an occasional correspondent, it is learned that since June 20 there have died 35 persons from epidemic dysentery, and that others are now sick from the disease, and it is estimated that when the cases now under treatment and considered hopeless shall have been added to the list there will have died within the corporate limits of the town about 2 per cent. of the total population, within a period of sixty days.

IOWA—*Davenport.*—Month of July, 1889. Population, 33,715. Total deaths, 24, including diphtheria, 5; and enteric fever, 1.

Keokuk.—Month of July, 1889. Population, 16,000. Total deaths, 30. None from contagious diseases.

KENTUCKY.—The State board of health of Kentucky has issued the following circular:

Prevention of Typhoid Fever.

OFFICE OF THE STATE BOARD OF HEALTH,
Bowling Green, Ky., August 12, 1889.

To the HEALTH OFFICIALS AND PEOPLE OF KENTUCKY:

This board desires to call the earnest attention of our health authorities and people to the gradually increasing prevalence of, and mortality from, typhoid fever, and to the growing importance of a constant resort to the methods which modern scientific researches have suggested for the prevention of this disease.

These preventive measures are of the more importance to the State because directed against a disease especially prevalent and fatal amongst persons in the prime of life, who contribute most to the public wealth and prosperity. Considered purely as an economic problem, the feature of it probably least thought of by most people, the importance of this disease can scarcely be overestimated. Statistics show that ten persons are sick for every one that dies of this disease, and to say nothing of the cash value to the State of those who die every year, and it is conceded that the State has no more valuable property than that represented in its vigorous population, the loss of time and labor, and the necessary cost incurred in attention to those who finally recover, makes an annual tax upon our people of startling proportions.

Typhoid fever is probably the most preventable of all diseases, not even excepting small-pox. It is now known that, like cholera and dysentery, the germ or specific cause of this disease is contained in the discharges from the bowels of those sick of it, and that while other methods of introducing the poison into the system are possible, it most generally gains entrance through the medium of an infected water supply—usually the use of well water polluted by fecal matter. This may be direct from drinking such water, or indirect, as by using milk or other articles of food or drink from cans or vessels washed in it. Ice, from an infected source, is also dangerous, since it has been proven that freezing does not destroy the infective principle.

While water from all sources of supply is liable to contamination, well water is especially so, whether located in city, town, summer watering place, or country. Thus out of 314 cases occurring in Louisville in 1884, 298 of the persons used well water habitually, and some of the other 16 did so occasionally. In the now famous epidemic at Plymouth, Pa., involving the sickness of 1,104 persons, the death of 114, and an actual outlay in money of $67,100.17, the outbreak was traced to the use of water polluted by the fecal discharges of one imported case of the disease. Facts no less convincing might be multiplied indefinitely if space permitted. In a smaller way they are common in the experience of most physicians in active practice.

Usually the wells are sunk near the kitchen, and in dangerous proximity to the privy and other sources of contamination. The well draws its supply from an inverted cone, having its apex at the bottom of the well and its base at the surface of the ground. In dry seasons this base is often extended until the well becomes a receptacle for the more or less perfectly filtered filth from all the sources found in the average back yard, and the water, often sparkling in its apparent purity, becomes a culture fluid for any disease germs finding their way into it.

Two methods of prevention, having the same general object in view, are to be recommended. The first involves the thorough disinfection of all discharges from the bowels of typhoid-fever patients. This is best done by the use of a solution of chloride of lime, 8 ounces to the gallon of water, using a quart of this solution for each discharge, and allowing it to stand in the vessel at least one hour before emptying. A solution of corrosive sublimate, 2 drachms to the gallon of water, will answer the same purpose, but requires to remain longer in contact with the material to be disinfected. Bed and body linen soiled by such patients should be disinfected by the use of the same solution or by boiling.

The second method relates to avoiding the use of suspicious water, and especially well water, and where this can not be done, to boil such water before it is used for drinking purposes. In the absence of a pure and well guarded public water supply, properly stored cistern water is probably open to least objection.

The effectual practice of these methods will require intelligent care and some expense, but it is confidently believed that their general adoption would result in the practical disappearance of a disease which is not only a disgrace to our civilization, but an annual scourge and tax upon the people of Kentucky, in comparison with which yellow fever and cholera sink into insignificance.

By order of the Board.

PINCKNEY THOMPSON, M. D.,
President.

J. N. McCORMACK, M. D.,
Secretary.

MASSACHUSETTS—*Fall River.*—Month of July, 1889. Population, 69,000. Total deaths, 177, including enteric fever, 2; diphtheria, 1, and erysipelas, 1.

Worcester.—Month of July, 1889. Population, 82,000. Total deaths, 87, including diphtheria, 4; enteric fever, 1, and whooping-cough, 4.

MICHIGAN.—Reports to the State board of health, Lansing, during the month of July, 1889, indicate that, compared with the preceding month, diarrhœa, cholera morbus, cholera infantum, dysentery, and inflammation of the bowels increased in prevalence. Including reports by regular observers and others, diphtheria was reported present during the month at 26 places; scarlet fever, at 30 places; enteric fever, at 18 places, and measles, at 13 places.

During the week ended August 3, reports from fifty-four observers, indicated that cholera morbus, pleuritis, and intermittent fever increased, and bronchitis, inflammation of the kidneys, scarlet fever, tonsillitis, pneumonia, cholera infantum, diphtheria, erysipelas, and influenza decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported during the week, and since, at 8 places; scarlet fever, at 10 places; enteric fever, at 5 places, and measles, at 2 places.

Grand Rapids.—Month of July, 1889. Population, 70,000. Total deaths, 64, including diphtheria, 1; enteric fever, 1, and measles, 1.

MISSOURI—*St. Louis.*—Month of July, 1889. Population, 440,000. Total deaths, 696, including scarlet fever, 3; diphtheria, 14; whooping-cough, 4, and enteric fever, 12.

NEW YORK—*Rochester.*—Month of July, 1889. Population, 130,000. Total deaths, 263, including diphtheria, 1; enteric fever, 5, and whooping-cough, 1.

OHIO—*Cincinnati.*—Month of July, 1889. Population, 325,000. Total deaths, 580, including diphtheria, 20; measles, 32; scarlatina, 2; enteric fever, 12, and whooping-cough, 1.

RHODE ISLAND—*Newport.*—Month of July, 1889. Population, 22,000. Total deaths, 19. None from contagious diseases. One case of measles was reported.

TEXAS—*San Antonio.*—Month of July, 1889. Population, 50,000. Total deaths, 69, including diphtheria, 1.

VIRGINIA—*Lynchburg.*—Month of July, 1889. Population, ———. Total deaths, 44, including enteric fever, 2.

Publications received.

Yellow fever: A new treatment. Forecast for 1889. By Wolfred Nelson, M. D. New York, 1889.

The mayor's special message, with accompanying documents, to the city council of the city of Council Bluffs. March, 1889.

Third annual report of the board of health of the city of Keokuk, Iowa, year ending March 31, 1889.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Aug. 10	1,576,689	838	.....	.....	.....	.....	.....	.....	10	4	17	3	14
Chicago, Ill.	Aug. 10	1,100,000	396	.....	.....	.....	.....	.....	.....	10	1	21	6	.....
Philadelphia, Pa.	Aug. 10	1,040,245	426	.....	.....	.....	.....	.....	.....	27	3	6	1	2
Baltimore, Md.	Aug. 10	500,343	230	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
St. Louis, Mo.	Aug. 10	450,000	182	.....	.....	.....	.....	.....	.....	2	1	1	1	1
San Francisco, Cal.	July 2	350,000	86	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Cincinnati, Ohio.	Aug. 10	325,000	118	.....	.....	.....	.....	.....	.....	3	.....	4	2	.....
New Orleans, La.	Aug. 3	254,000	103	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Cleveland, Ohio.	July 13	235,000	106	.....	.....	.....	.....	.....	.....	1	3	3	.....	.....
Cleveland, Ohio.	July 20	235,000	93	.....	.....	.....	.....	.....	.....	4	.....	1	.....	1
Detroit, Mich.	Aug. 3	230,000	84	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	1
Pittsburgh, Pa.	Aug. 10	230,000	78	.....	.....	.....	.....	.....	.....	3	3	1	1	1
Washington, D. C.	Aug. 10	225,000	132	.....	.....	.....	.....	.....	.....	4	.....	7	.....	.....
Minneapolis, Minn.	Aug. 10	200,000	41	.....	.....	.....	.....	.....	.....	2	.....	1	1	.....
Rochester, N. Y.	Aug. 10	130,000	61	.....	.....	.....	.....	.....	.....	.....	.....	2	1	1
Providence, R. I.	Aug. 10	127,000	56	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Richmond, Va.	Aug. 3	100,000	54	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	4
Denver, Colo.	Aug. 9	100,000	36	.....	.....	.....	.....	.....	.....	4	.....	2	.....	.....
Toledo, Ohio.	Aug. 9	89,000	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3
Fall River, Mass.	Aug. 10	69,000	49	.....	.....	.....	.....	.....	.....	2	2	.....	.....	.....
Nashville, Tenn.	Aug. 10	65,153	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	Aug. 10	60,145	40	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	Aug. 10	50,000	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Aug. 10	42,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Aug. 3	42,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Galveston, Tex.	Aug. 2	40,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Aug. 10	30,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	Aug. 3	30,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	Aug. 10	30,000	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Aug. 10	26,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Aug. 10	25,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Aug. 8	22,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa.	Aug. 3	16,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa.	Aug. 10	16,000	5	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended July 27, corresponded to an annual rate of 21.0 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Huddersfield, viz, 10.7, and the highest in Plymouth, viz, 28.0 a thousand. Diphtheria caused 7 deaths in Bradford, 3 in Plymouth, 5 in Salford, and 2 in Liverpool.

England.—The quarterly return of the Registrar-General of England states that the population of the United Kingdom in the middle of 1889, is estimated at 37,808,892 persons; that of England and Wales, at 29,015,613; of Scotland, at 4,077,070, and of Ireland, at 4,716,209.

In the United Kingdom 163,765 deaths were registered during the quarter ended June 30, 1889. In the 28 great towns, including London, the annual death rate was 18.2. The death rate in London was 16.0,

whereas it was 20.0 in the 27 other towns. The lowest rates in these towns were 14.7 in Brighton, 14.9 in Leicester, 16.1 in Derby, and 16.2 in Bristol. The highest rates were 23.8 in Plymouth, 23.9 in Blackburn, 28.0 in Manchester, and 32.6 in Preston.

The deaths included measles, 4,464; whooping-cough, 3,405; scarlet fever, 1,347; diphtheria, 1,041; fever, 999, and small-pox, 10.

A summary of the weekly returns received by the Registrar-General, shows that the annual death rate during the quarter in 29 colonial and foreign cities, having an aggregate population of 16,000,000, was 26.6 a thousand.

In the 20 European cities the mean rate was 25.8 a thousand, against 18.2 in the 28 larger English towns. Among the 29 colonial and foreign cities the lowest death rates were 16.3 in Baltimore, 18.9 in Brussels, 19.0 in The Hague, and 19.3 in Stockholm. The rates in the other towns ranged upwards to 31.7 in Buda-Pesth, 32.9 in Munich, 34.0 in Breslau, 35.4 in St. Petersburg, 43.7 in Alexandria, 47.2 in Madras, and 52.9 in Cairo. The rate in Paris was 22.2, in Berlin 27.5, and in Vienna 26.7, against 16.0 in London.

London.—One thousand five hundred and fifty-three deaths were registered during the week, including measles, 20; scarlet fever, 6; diphtheria, 44; whooping-cough, 19; enteric fever, 8; diarrhœa and dysentery, 271, and cholera and choleraic diarrhœa, 10. The deaths from all causes corresponded to an annual rate of 18.6 a thousand. Diseases of the respiratory organs caused 160 deaths. In greater London 1,900 deaths were registered, corresponding to an annual rate of 17.6 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 41, and whooping-cough, 11.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended July 27, in the 16 principal town districts of Ireland, was 22.3 a thousand of the population. The lowest rate was recorded in Sligo, viz, 9.6, and the highest in Wexford, viz, 29.9 a thousand. In Dublin 168 deaths were registered, including measles, 4; enteric fever, 4; diarrhœa, 11; dysentery, 1, and whooping-cough, 3.

Scotland.—The deaths registered in 8 principal towns during the week ended July 27, corresponded to an annual rate of 17.9 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Dundee, viz, 10.8, and the highest in Paisley, viz, 28.3 a thousand. The aggregate number of deaths registered from all causes was 459, including measles, 20; scarlet fever, 3; diphtheria, 6; whooping-cough, 21; fever, 4, and diarrhœa, 41.

BRITISH INDIA—*Calcutta.*—The number of deaths registered in May, 1889, was 931, against 866 in the preceding month; showing an annual rate of 25.7 against 23.9 a thousand of the population, which is estimated at 433,219. Compared with the corresponding month of the preceding year, there was a decrease of 11 deaths due to the decrease of deaths from cholera and other diseases. There were 142 deaths from cholera, against 104 in the preceding month. There were 9 deaths from small-pox, against 17 in the previous month. Fevers caused 267 deaths, as against 214 in the preceding month. Bowel complaints caused 69 deaths, as against 65 in the preceding month. The mortality from other causes amounted to 417, against 440 in the preceding month. The total exceeds all the corresponding figures of the last ten years excepting 1888, and also surpasses the decennial mean by 51.

Malta and Gozo.—Two hundred and three deaths were registered during the period from the 16th to 30th of June, 1889, including measles, 1; whooping-cough, 2, and diphtheria, 1.

ISLAND OF MAURITIUS, INDIAN OCEAN.—The United States consul at Port Louis reports, under date of June 7, 1889, that small-pox prevails on the island of Mauritius, 20 cases being in the district of Flacq, which is 17 miles from Port Louis. The premises are quarantined, and the authorities are doing their best to stamp out the disease, which has not yet become epidemic. Several vessels had left Port Louis for New York, with sugar, when the consul's dispatch was written.

TASMANIA—*Hobart.*—Month of May, 1889. Population, 34,725. Total deaths, 43, including enteric fever, 6.

ITALY—*Catania.*—The United States consul, under date of July 24, 1889, transmits the following semi-annual report of contagious diseases and deaths from January to June, 1889, also comparison with 1888:

Diseases.	Deaths in six months, 1889.	Same period, 1888.
Small-pox	35	172
Typhoid fever	27	53
Scarlet fever	68	35
Diphtheria	59	87
Other contagious diseases	47	103
Total	236	450
Decrease in 1889	214	

Total deaths from all causes in the six months of 1889	1,457
Total deaths from all causes in the six months of 1888	1,922
Present officially-estimated population	108,123

No prevailing diseases in the six months.

BRAZIL—*Macayo.*—Month of June, 1889. Population, 17,000. Total deaths, 102, including small-pox, 62. There were 151 cases of small-pox reported during the month.

CUBA—*Havana.*—August 5, 1889. There were 583 deaths in this city during the month of July; 63 of those deaths were from yellow fever, 39 from so-called pernicious fever, 8 from paludal fevers, 20 from enteric fever, 2 from small-pox, and 1 from croup; 16 deaths from yellow fever for the week ended August 9.

Santiago de Cuba.—The United States consul, under date of July 29, furnishes the following:

Inclosed I beg to hand you health report for the first half of July. I compiled the statement in a manner different from my previous lists, believing the report sent herewith to be more comprehensive, giving you a better idea of the actual health of this *port* and *city*. It is curious to note that the port only records one death, and that from drowning. Yellow fever has claimed 4 victims, 3 of them soldiers brought here from the coast posts with intermittent fever, and put into the yellow-fever wards of the military hospital outside of the town limits. In the city 1 death from yellow fever is registered, a priest who had been here but a short time. Small-pox has entirely disappeared, and the fact that 45 persons only have died in fifteen days in a city of 48,000 inhabitants, is sufficient proof of the remarkably healthy condition of this city.

Cardenas.—August 3, 1889.—Weather warm, but good health in town and harbor.

Cienfuegos.—The United States consul, under date of August 5, states that the cases of yellow fever (reported in the mortality tables, foreign cities) are confined to the troops, and that no cases have occurred in the shipping or in the town.

MEXICO.—*Guaymas.*—Month of July, 1889. Population, 6,000. Total number of deaths, 15. No particular sickness. Sanitary condition good.

GUATEMALA.—The United States consul-general, in his dispatch dated July 28, 1889, says:

I have the honor to inclose to you for your information, a copy of a letter addressed to me by Mr. John T. Anderson, consular agent of the United States at Livingston, Guatemala, reporting the death of a man named MacAlpine, from yellow fever, certified to by the Government medical officer at that port. He adds that "a very intelligent Cuban physician, who studied his profession in Havana, and who has resided here (Livingston) during the past two years, states that during this time he has not seen a case of yellow fever."

Mr. Anderson further writes that the health of the town is good, and that until otherwise instructed, he shall continue to attach medical certificates, as to the condition of the public health, to all bills of health issued from his agency.

I have telegraphed to Mr. Anderson to inquire if there are any more cases of yellow fever in Livingston. If his response should show additional ones developing, I shall deem it my duty to cable to you the facts, so that the proper precautionary measures may be taken by the authorities of our American ports, through the medium of the State Department.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	July 27	5,642,015	1,900	.....	.....	.....	.....	8	9	46	22	.....
Paris	July 27	2,260,945	967	.....	.....	1	.....	14	5	24	29	14
Glasgow	July 27	545,678	205	.....	.....	.....	.....	3	1	4	.....	.....
Warsaw	July 20	445,770	294	.....	.....	7	.....	2	4	.....	.....	.....
Amsterdam	July 27	399,051	171	.....	.....	.....	1	1	.....	3	.....	.....
Copenhagen	July 20	307,000	162	.....	.....	.....	.....	1	3	5	.....	.....
Edinburgh	July 20	266,900	81	.....	.....	.....	.....	1	.....	.....	2	3
Palermo	July 27	250,000	109	.....	.....	1	.....	.....	1	2	.....	.....
Belfast	July 27	229,622	106	.....	.....	.....	1	6	.....	.....	.....	.....
Genoa	July 31	180,153	69	.....	.....	1	.....	.....	.....	2	.....	.....
Toronto	Aug. 3	175,000	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Trieste	July 20	154,500	72	.....	.....	.....	.....	.....	.....	4	.....	.....
Stuttgart	July 27	125,500	59	.....	.....	.....	.....	.....	.....	1	.....	.....
Pernambuco	July 9	120,000	85	.....	.....	.....	.....	.....	1	.....	.....	.....
Havre	July 27	112,074	47	.....	.....	.....	.....	1	.....	.....	.....	.....
Edinburgh	July 20	76,400	30	.....	.....	.....	.....	.....	.....	1	.....	.....
Cadiz	July 27	65,028	37	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cienfuegos	July 29	40,655	29	.....	5	.....	.....	.....	.....	.....	.....	.....
Cienfuegos	Aug. 5	40,655	15	.....	2	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	July 25	23,800	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Aug. 1	23,800	27	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	July 21	23,631	11	.....	.....	1	.....	.....	.....	.....	.....	.....
Antigua	July 14	15,847	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antigua	July 21	15,847	11	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract / No. 34. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE.
Washington, D. C., August 23, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended August 23, 1889, published in accordance with section 4, Act of Congress, approved April 29, 1878.

UNITED STATES.

Reports from National Quarantine Stations.

CAPE CHARLES, VA.—There were 29 vessels spoken and 4 inspected and passed for the week ended August 16.

DELAWARE BREAKWATER, DEL.—The American ship John A. Briggs arrived at this station August 20, thirty-nine days from Rio de Janeiro. The crew were all well, but there had been several cases of yellow fever on board while in Rio. The vessel brought the dead body of the captain's wife. The captain stated that it was in a hermetically sealed leaden coffin, and the coffin encased in a box coated with pitch. He desired to ship by rail to Machias, Me. The quarantine officer was instructed to refuse to allow shipment of the body until the permission of the boards of health of the States through which it must pass was obtained. Although the medical certificate stated "pernicious stroke" as the cause of death, the inference is strong that the death was actually caused by yellow fever.

Two vessels inspected and passed for the week ended August 17.

GULF QUARANTINE (NORTH CHANDELEUR ISLAND), LA.—The schooner Connecuh, previously reported, was discharged August 8. The bark Olive Mount, also reported in last abstract, was discharged August 14. The Spanish bark Maria Bilboa arrived August 13 from Havana en route to Pascagoula. This vessel had 4 cases of yellow fever on board in September last, and was treated at Ship Island. Her sanitary condition is reported as *now* excellent. She has been scraped and newly painted everywhere above ballast. Her ballast was of sandstone and earth. As this vessel had lain for ten days at the San José wharf in Havana, and while lying in open bay prior to sailing 2 of the crew were missing and 1 sent to the hospital, it was considered necessary to again disinfect the vessel.

The Norwegian bark Southern Queen arrived August 14 from Rio de Janeiro with 2 cases of sickness from lead colic and 1 of extensive ulcer, and 2 men not on the crew-list. Two men were sick in hospital at Rio, 1 probably not yellow fever, 1 doubtful; 1 man left in Rio, said to have consumption, and the man shipped in his place had just come from the hospital. The master had a fever (in bed eight days), commencing the second day out of Rio. The clinical history was one of yellow fever. One other man was sick on the third day with the same history. "Both of these were certainly yellow fever, brought aboard by the man newly shipped." (He had come on board with his hospital clothes.) There was no other sickness on board until the vessel was painted, off Pensacola, when the men had lead colic. Held for disinfection.

SAN DIEGO, CAL.—Three vessels inspected and passed.

SOUTH ATLANTIC.—During a severe storm on Sapelo Island the officers' quarters at this station were struck by lightning. Passed Assistant Surgeon White was severely injured, and the quarters much damaged. Passed Assistant Surgeon White's injuries include some severe burns and a deep wound in the foot and leg. His clothing was torn, and the shoe on one side torn into fragments. A gentleman sitting near suffered no injury.

Assistant Surgeon Groenevelt has been detailed to take temporary charge of the station.

GEORGIA.—Inspector Posey reports as follows on the sanitary condition of Brunswick:

U. S. MARINE-HOSPITAL SERVICE,
DISTRICT OF THE GULF,
Port of Brunswick, Ga., August 10, 1889.

GENERAL: In obedience to your letter of the 2d August and telegram of the 5th, I returned to Brunswick, Ga., arriving there on the afternoon of August 6. I made known the object of my visit to the various practitioners, and requested the privilege of visiting with them any cases under treatment whose course and symptoms were similar to the case of young Nightingale.

During my stay there I received no invitation from these gentlemen, as they stated that there were no cases of that character under their care.

Previous to the occurrence of these more sthenic types of malarial-remittent fever, the city authorities had been forced to open several large drains in the city, thus exposing a great deal of moist soil containing a large amount of rich vegetable humus and some animal matter, to effect a more thorough drainage of the city (which has but a slight elevation), the large drains emptying into the Brunswick River and adjoining creeks, whose waters are salt, and during high tides prevents the rapid emptying of the city's ditches. A large percentage of the class of cases mentioned occurred where these excavations were most

extensive, and, I think, accounts for the intensified toxic effects exhibited by these types of malarial fever.

The experience of sanitarians is justly opposed to any extensive disturbance of the soil in tropical and subtropical towns and cities during the summer season, as it has almost invariably aggravated the indigenous types of fever by adding a more virulent element to the atmosphere from the moist soil exposed to the intense heat of the southern sun.

The phenomenal growth in the last four years of this handsome city, whose population is now estimated at 10,000, and which ranks as an important sea-port city for the exportation of the staple products—cotton, resin, turpentine, and lumber—of Georgia and adjoining States, is destined in the near future to become a formidable rival of her older competitors on the Atlantic sea-board.

In view of the fact that her tonnage for export cargoes comes almost exclusively from South and Central American and Gulf ports, as well as from the West Indies, the question of maritime quarantine and sanitation becomes one of vital interest to this city.

At my request, Dr. J. A. Dunwody, city health officer, and who also has charge of the quarantine station, escorted me to inspect its location and methods on the afternoon of August 7. It is situated on a small sand-spur in Oglethorpe Bay, 3 miles by river from the city wharves. Intervening between the station and the corporate limits of the city is an area of salt marsh 1 mile wide. At this point all vessels are boarded, inspected, and detained, subject to the quarantine regulations of the port. The present site of the station is highly objectionable on account of its proximity to the city, which renders it easy for crews of vessels undergoing quarantine to visit the city. The present crude system of disinfection and fumigation affords only a very limited protection, and, in view of the increasing tonnage from tropical ports, the health authorities have determined to establish a new station on the opposite side of the river at the entrance of Oglethorpe Bay, which will be entirely isolated. This station will adopt the "Holt system" on a scale adapted to their present needs. I think that on account of the character of vessels seeking cargoes at the port of Brunswick, and the crude methods of disinfection, it is constantly exposed during the summer months to the introduction of yellow fever, and the progressive health authorities have resolved to devote the handsome revenue derived from disinfection fees (which heretofore has been diverted into the city's exchequer) to establish a model station, which will possess all the apparatus, and apply the improved methods of the modern system of maritime sanitation and quarantine evolved by that accomplished sanitarian, Dr. Joseph K. Holt, of New Orleans, La. The adoption of this system will enable the health authorities of the city of Brunswick to secure the highest degree of protection against the introduction of infectious and contagious diseases, and induce tonnage to seek that port.

The following statement was obtained from Health Officer Dunwody, which shows the number of vessels and tonnage which were required to discharge ballast at the station from August 1, 1888, to August 1, 1889: 128 vessels, having a total tonnage of 75,637.

I append letter from Dr. Dunwody in regard to the methods pursued at the quarantine station.

Respectfully yours,

J. L. POSEY, M. D.,
Sanitary Inspector, U. S. M. H. S.

OFFICE HEALTH OFFICER,
Brunswick, Ga., August 10, 1889.

J. L. POSEY, M. D.,
Sanitary Inspector M. H. S., Brunswick, Ga.

DEAR SIR: In pursuance of the request to give you a résumé of the system of quarantine as practiced in this port, I beg to state the following facts: Upon the arrival of a vessel it is immediately inspected, and if it is found that it comes from an infected port, and has or has had any sickness on voyage, it is sent to the Sapelo Quarantine Station peremptorily; if I find no sickness on board and none on passage, it is ordered to discharge ballast at the quarantine station; however, before the ballast is touched, it, in company with the *entire* vessel, is treated to a thorough bath of the bi-chloride of mercury, 1 to 1,000; the clothing, mattresses, and ship's linen is sprayed with the same solution. The hold of the vessel is required to be closed for thirty hours; the forecastle and cabin are in like manner closed for eight hours, during the fumigating process. I use 3 pounds of sulphur to 1,000 cubic feet of space. After the ballast is discharged the same process is repeated, and the detention period is five days after it has been discharged.

If a vessel comes from a port not known to be actually infected, but to be regarded as suspicious, there is but one process of disinfection and fumigation, which is done after the ballast is out and the usual five days' detention, after which time they are given free pratique, provided everything is all right at the expiration of that time.

Respectfully,

J. A. DUNWODY,
Health Officer.

Rules and Regulations of the Board of Health.

From and after this date the following regulations for the government of quarantine at this port will be enforced:

RULE I. *Be it ordained by the mayor and aldermen of the city of Brunswick in council assembled,* That the quarantine station for vessels entering this port be, and the same is hereby, established at the quarantine station in Oglethorpe Bay, known as the Quarantine Station of the city of Brunswick, Ga.

RULE II. *Be it ordained by authority aforesaid,* That quarantine station for all vessels entering St. Andrew's Sound shall be station established by Rule No. 1 of these rules.

RULE III. *Be it further ordained by the authority aforesaid,* That all vessels from infected or suspected ports, and all vessels having sickness on board, must be brought to anchor either at quarantine station, or at St. Simon's Sound, if their destination be St. Simon's or Back River, and there remain without allowing any one to board, leave, or hold any communication with such vessels, except the health officer or his deputy, until the health officer shall have examined such vessel, and given the necessary instructions required by the board of health.

RULE IV. *Be it ordained by the authority aforesaid,* That all pilots piloting on St. Andrew's Sound and Satilla Rivers are hereby instructed to bring all vessels arriving from infected or suspected ports to quarantine station in Oglethorpe Bay.

RULE V. *Be it further ordained by the authority aforesaid*, That all vessels from infected or suspected ports having sickness on board, or having had same during voyage, from such port or ports, must be directed by pilot to proceed at once to the national quarantine station at Sapelo. Vessels discharged from the national quarantine station with certificate of national quarantine officer, must be brought to anchor in St. Simon's Sound, if destined to Back River or St. Simon's Island; to anchor at quarantine station, if bound to Brunswick; at St. Andrew's, mouth of Jeykl Creek, if bound to Satilla Rivers, and there remain until inspected and released by health officer of this port.

RULE VI. *Be it further ordained by the authority aforesaid*, That all vessels from foreign ports direct or via American ports, with or without sickness on board, shall, during entire year, be compelled to anchor at the quarantine anchorage grounds as above specified, and there remain until released by written permit of the health officer.

RULE VII. *Be it further ordained by the authority aforesaid*, That all coast-wise vessels arriving at port of Brunswick between May 1 and November 1 must be inspected by health officer or his deputy and given permit by such officer before landing either passenger or freight, and no person shall board or leave such vessel or hold communication therewith before health officer has made the inspection; but steam vessels and steamboats, running regularly to the port of Brunswick, may, by the captain or for his successors in office of such vessels giving a bond in the sum of $1,000, to the mayor and council of the city of Brunswick that there shall not be landed from said vessel any passenger or freight, should there be any sickness on board or having been any sickness during the voyage, until the health officer shall have examined said vessel, and given permit to land passengers and freight.

RULE VIII. *Be it further ordained by the authority aforesaid*, That no person shall board any vessel at the quarantine station, or at anchor in St. Simon's or St. Andrew's Sounds, under quarantine rules, or any vessels coming into the port before their arrival at their anchorage, if under the quarantine rules, or go alongside such vessels to hold any communication with such vessels, except the pilots, or health officer and his assistants required to disinfect such vessels, or the master or crew of such tug-boat as is employed by such vessels to tow them inward or outward from the quarantine anchorage, and only then while engaged in such necessary work. No person shall visit or land at quarantine station without a written permit from the health officer for each and every visit.

RULE IX. *Be it further ordained by the authority aforesaid*, That no steam tug or other vessel with any passenger or person other than her regular crew shall be permitted to have any communication whatever with any vessel under quarantine rules, except as hereinbefore provided.

RULE X. *Be it further ordained by the authority aforesaid*, That all vessels while under quarantine restrictions, must display a yellow flag at mast-head.

RULE XI. *Be it further ordained by the authority aforesaid*, That from May 1 to November 1 of each year, no vessel from infected or suspected ports will be allowed to either lighter or bring cargo of fruit up to the city.

Rule XII. *Be it further ordained by the authority aforesaid*, That pilots must in all cases before boarding any vessel make inquiry as to the sani-

tary condition of such vessel; if vessel has or has had sickness during voyage of pestilential character on board, he must not board her, but must direct her to national quarantine station. Pilot upon boarding a vessel subject to quarantine rules must have yellow flag displayed at mast-head and hand copy of the quarantine regulations to master at once, and immediately upon her arrival at anchorage report same to health officer.

RULE XIII. *Be it further ordained by the authority aforesaid*, That in case sickness breaks out on any vessel in the port of Brunswick, it shall be the duty of the health officer to examine such vessel and ascertain the nature of such sickness, and if in his opinion it is necessary he shall send such vessel to quarantine, or Sapelo Quarantine. When any sickness occurs aboard any vessel in port it shall be the duty of the master of such vessel to immediately report such sickness to the health officer.

RULE XIV. *Be it further ordained by the authority aforesaid*, That from May 1 to November 1 all vessels from infected or suspected ports, and all vessels from South America, West Indian, or Mexican ports, shall be required to discharge ballast at the quarantine station, or at any other point designated by the board of health, and undergo such process of cleaning and disinfecting as may be directed by the health officers before receiving permits to go to loading berths. After November 1, the place for discharging ballast shall be in the discretion of the health officer.

RULE XV. *Be it further ordained by the authority aforesaid*, That all vessels after discharging ballast at quarantine station shall move at once from the dock, if other vessels are waiting berth to discharge.

RULE XVI. *Be it further ordained by the authority aforesaid*, That any person or persons loitering around vessels which are under the quarantine rules, in small boats or otherwise, shall be held guilty of a violation of the quarantine regulations.

RULE XVII. *Be it further ordained by the authority aforesaid*, That the following charges shall be made by the health officer, and collected from the vessel subjected to the rules of the quarantine:

For every square-rigged vessel boarded and inspected, for each visit	$ 7 50
For every schooner boarded and inspected, for each visit	5 00
For every steamer or steamship boarded and inspected, for each visit	10 00
For every vessel in St. Andrew's Sound, for each visit	15 00

FUMIGATION FEES.

For every vessel of 100 tons or less, fumigating and disinfecting, each process	$10 00
For every vessel over 100 tons and less than 250 tons, each process	16 00
For every vessel of 250 tons or over and less than 500 tons, each process	22 00
For every vessel of 500 tons or over and less than 750 tons, each process	28 00
For every vessel of 750 tons or over and less than 1,000 tons, each process	34 00
For every vessel of 1,000 tons or over and less than 1,250 tons, each process	40 00
For every vessel of 1,250 tons or over and less than 1,500 tons, each process	46 00
For every vessel of 1,500 tons or over and less than 1,750 tons, each process	52 00
For every vessel of 1,750 tons and over, each process	58 00

RULE XVIII. *Be it further ordained by the authority aforesaid*, That any master or others in authority aboard any vessel who shall, when questioned, either by pilot before or after boarding or by health officer as to sickness being or having been aboard during voyage, and who shall give false answers, or who shall give any false information as to the sanitary condition of said vessel shall be deemed guilty of a violation of the rules of the board of health, and shall, on conviction before

the police court be fined in a sum not exceeding $200, or imprisonment thirty days, or both, at the discretion of the court.

RULE XIX. *Be it further ordained by the authority aforesaid*, That any master of any vessel or any pilot or any other person violating any of the provisions of this ordinance, shall, on conviction thereof in the police court, be fined in a sum not exceeding $100 or imprisonment for a period not exceeding thirty days, or both, for each offense, in the discretion of the court.

RULE XX. *Be it further ordained by the authority aforesaid*, That all ordinances or parts of ordinances conflicting with this ordinance, be, and the same are hereby, repealed, so far as they so conflict.

Brunswick, Ga., this May 3, 1889.

J. A. BUTTS,
Chairman Board of Health.
W. F. SYMONS,
Secretary.

Adopted and approved by the mayor and council of the city of Brunswick.

M. J. COLSON,
Mayor.
E. A. NELSON,
Clerk and Treasurer.

Reports of States, and Yearly and Monthly Reports of Cities.

CALIFORNIA.—From the report for July of the permanent secretary of the California State board of health (Dr. Tyrell), the following is extracted:

Reports received from 120 localities throughout the State indicate a remarkable absence of zymotic diseases. All observers agree that a general mildness of type characterized the sickness which had come under their notice, which will, perhaps, in a measure account for the limited mortality recorded during the month. As might be expected, the most prevalent of all disorders of the system were those affecting the stomach and bowels, and this was particularly noticed during and after the very warm days that were experienced in the earlier and latter part of the month.

Cholera infantum was noticed in several reports. It was present in Sacramento, Cedarville, College City, Mariposa, Lodi, Forest Hill, Fresno, Salinas, Chico, Grass Valley, Lakeport, Lemoore, Oakland, Rocklin, San Bernardino, San José, and San Francisco.

Diarrhœa and dysentery were observed with undue frequency in Alturas, Fresno, Hollister, Williams, North Bloomfield, Shasta, Red Bluff, Anderson, Redding, Brownsville, Eureka, Lemoore, Merced, Colfax, College City, Benicia, Susanville, Lakeport, El Monte, Santa Paula, Etna Mills, Calico, Downey, Oakdale, Truckee, Los Angeles, Marysville, Oakland, and San Francisco.

Small-pox was not reported from any locality during the month. We have therefore come to the reasonable conclusion that the disease is now entirely absent from the State for the first time in over two years. This fact should now be taken advantage of by urging immediate vaccination of all unvaccinated persons, so that if the disease is again imported into the State it will find no pabulum upon which to feed, and

will die for want of sustenance. By thorough vaccination there need not be another case of small-pox in California. It is to be hoped that the new law upon vaccination will tend toward this desirable end, and by protecting our children, lessen the chances of any severe epidemic, even if again attacked by the insidious foe.

Measles was observed in a few instances, in San José, Lodi, and Angels Camp. It was very mild, and without any mortality.

Scarlet fever is mentioned in but two reports, and they were sporadic cases.

Diphtheria and croup are mentioned in reports from Sacramento, Napa (imported from Howell Mountain), Anaheim, El Monte, Downey, Los Angeles, San José, Red Bluff, Truckee, Eureka, Fresno, Salinas, and San Francisco. The disease is not reported epidemic in any locality, and the type is not of a severe character, according to the advices received.

Whooping-cough was noticed in Napa, Lemoore, Mariposa, Redding, Elsinore, Susanville, San José, Dixon, Eureka, Fresno, Chico, Hollister, Los Angeles, Oakland, and San Francisco.

Erysipelas in a sporadic form was observed in Truckee, Redding, North Bloomfield, Lower Lake, Long Beach, Fresno, Cedarville, Dixon, Chico, and San Francisco.

Typho-malarial fever, as it is called, seems to prevail in many localities; it is noticed in reports from Anderson, Igo, Lemoore, College City, Oakdale, Anaheim, Truckee, Shasta, Los Angeles, Tulare City, and Visalia. Although the disease is frequent, the mortality is exceedingly limited.

Typhoid fever, while not prevailing to any great extent, was noticed in reports from Sacramento, Redding, Anderson, Etna Mills, North Bloomfield, Chico, El Monte, Calico, Downey, San José, Alturas, Fresno, San Diego, Placerville, Los Angeles, Mendocino, Nevada City, Santa Ana, Pasadena, Sisson, Watsonville, and San Francisco. As this is the season of the year when typhoid fever is most likely to prevail, and thereby increase the chances of the contamination of our drinking water, and as it is also at this time that visitors leave the warm valleys to seek health and recreation at the various mountain and seaside resorts, we can not too earnestly advise such sojourners to criticise keenly the sanitary surroundings of the place in which they propose to spend their summer holiday; examine the outhouses and privies; see where the sewage is conveyed and deposited; note the proximity of the closets to the well, and if the well is a dug one, and within 300 feet of the sewer, cess-pool, or privy, do not drink the water from such well, except you know it to be boiled. In short, avoid all summer resorts where cleanliness and sanitation is not the rule, where every outhouse, privy, and cess-pool is not deodorized and disinfected as regularly as the week comes around. Without this, danger is ever present, and we firmly believe that more typhoid fever is contracted in these insalubrious country houses, whose portals we seek for health, than the public is aware of. The frequent proximity of cow yards, hen roosts, stables, and even pig pens, make the surrounding atmosphere anything but salubrious. It is therefore an act of prudence to study the sanitary surroundings of a pleasure resort before incurring the exposure, and perhaps fatal danger, which insanitary conditions always present.

Remittent and intermittent fevers were quite prevalent along the river bottoms, which is to be expected at this season of the year.

Pneumonia is not mentioned as frequent in any of our reports. Some cases were noticed in San Francisco, Eureka, Benicia, Anderson, Angels Camp, College City, Chico, Jackson, Los Angeles, Mariposa, Oakland, Salinas, San José, Santa Ana, and Trinity.

Bronchitis was also noticed in several towns along the sea-coast. The type was not of a severe character, and its prevalence was limited.

Cerebral fever is mentioned in reports from Anderson, Angels Camp, College City, Fresno, Lodi, Eureka, Napa, Sacramento, San José, Susanville, and San Francisco. The appearance of cerebral fever in different sections of the State would seem to confirm the opinion of late observers that the infectious germ is preserved in the soil, and thence passed into the atmosphere, as it is now known that epidemics of this disease may appear at any season independent of local temperature; and as drying does not destroy the vitality of the disease germ, it may explain those cases of the disease which seem to spread by way of the air.

Reports to the State board of health of California, from 100 cities and towns, having an aggregate population of 803,550, show a total of 897 deaths, including enteric fever, 29; whooping-cough, 11; scarlet fever, 1; and diphtheria, 15.

San Francisco.—Month of July, 1889. Population, 330,000. Total deaths, 443, including diphtheria, 6; enteric fever, 13; whooping-cough, 3; and scarlatina, 1.

CONNECTICUT.—Reports to the State board of health from 166 towns, having an aggregate population of 756,572, show a total of 1,329 deaths from all causes, including measles, 10; scarlet fever, 4; diphtheria and croup, 35; whooping-cough, 7; and enteric fever, 21.

New Haven.—The following circulars have been issued by the board of health:

1.—TO PREVENT THE SPREAD OF TYPHOID FEVER.

Have the patient sleep alone. Burn all food left by the patient.

Boil all dishes for fifteen minutes immediately after the patient has finished using them.

Clothing removed from the patient and bed-clothing should be disinfected by soaking them for half an hour in a weak solution of carbolic acid, made by mixing 2½ ounces of pure carbolic acid with a gallon of water. Then remove them from this solution and boil in common water for half an hour.

All discharges from the kidneys and bowels must be received into vessels which contain about a pint of strong solution of carbolic acid, made by mixing 5 ounces of pure carbolic acid with a gallon of water. The discharges must remain in the disinfecting solution one hour before being thrown into the water-closet or privy.

All persons who handle or have anything to do with the patient should wash their hands repeatedly with soap and water, and pay great attention to cleanliness.

The physician is requested to see that these rules are carefully observed.

2.—TO PREVENT THE SPREAD OF SCARLET FEVER AND DIPHTHERIA.

As soon as any person is taken sick with scarlet fever, or diphtheria, select a room as remote as possible from the rest of the family.

Remove from the room all unnecessary furniture, rugs, and hangings, then have the patient placed in this room and not allowed to leave it while sick.

Allow only necessary attendants to enter this room.

Keep all other people out of the room and away from those who attend the patient.

Persons who live in the house, or have lived in the house during any part of the disease, must not go to school, church, or to any public gathering, nor to any house where there are children.

Immediately disinfect every article which is taken from the sick room.

To disinfect dishes, boil them in common water for half an hour.

To disinfect bed-clothes, the patient's clothing, towels, napkins, handkerchiefs, and other similar articles: Before removing them from the sick room, place them in a tub, and soak them for half an hour in a weak solution of carbolic acid, made by mixing 2½ ounces of pure carbolic acid with 1 gallon (4 quarts) of water. Then remove the clothes from the room and boil them in common water for half an hour.

Burn all of the food which the patient leaves.

All discharges from the nose, mouth, kidneys, and bowels must be received into vessels containing a strong solution of carbolic acid, which is made by mixing 5 ounces of pure carbolic acid with 1 gallon of water. The discharges must be allowed to remain in this solution for one hour before being thrown into the water-closet or privy.

In case of death, wash the body with the strong carbolic solution. The burial must be private.

After the patient has recovered, or, if the patient dies, after the body has been removed, disinfect the room which the patient has occupied in the following way: Remove from the room and boil all crockery, silver, or plated ware; all cotton, linen, or woolen articles which have been in the room must be soaked in the weaker solution of carbolic acid for half an hour and boiled, as previously directed. Open the windows and allow the dust in the room to settle. Then wash the wood-work, floors, windows, and furniture with the weaker solution of carbolic acid, made by mixing 2½ ounces of pure carbolic acid with 1 gallon of water. Be especially careful to wash the dust from over the doors and windows. Remove all paper from the walls and burn it. Then either whitewash, paper, or paint the walls and ceiling. All bed-ticking, mattresses, pillows, and all upholstered parts to furniture, must be sponged with the weaker carbolic acid solution, and then taken out and thoroughly beaten and brushed. Finally, after these directions have been carried out, the room should be thoroughly aired for two days by opening the doors and windows.

Do not allow any child who has had scarlet fever to attend school until four weeks after the disappearance of the eruption.

Remember that canker rash, scarlet rash, and scarlatina are the same as scarlet fever, and the same precaution must be used. Severe forms of scarlet fever may be caught from mild cases.

In diphtheria, all secretions from the nose and mouth must be received upon cloths which can be burnt, or into a cup, which can be disinfected with the stronger solution of carbolic acid.

The physician is requested to see that these rules are carefully observed.

Month of July, 1889. Population, 85,000. Total deaths, 159, including enteric fever, 2; whooping-cough, 1; and diphtheria and croup, 11.

GEORGIA—*Savannah.*—Month of July, 1889. Population, 57,000. Total deaths, 110, including enteric fever, 3.

ILLINOIS—*Chicago.*—Month of July, 1889. Population, 1,100,000. Total deaths, 754, including diphtheria, 54; scarlet fever, 14; enteric fever, 29; measles, 12; and whooping-cough, 5.

IOWA—*Dubuque.*—Month of July, 1889. Population, 35,000. Total deaths, 30. None from contagious diseases. Ten cases of scarlet fever, 1 of enteric fever, and 4 of erysipelas, were reported during the month. No deaths from these diseases.

KENTUCKY—*Louisville.*—Month ended August 3, 1889. Population, 227,000. Total deaths, 338, including diphtheria, 1; scarlet fever, 1; enteric fever, 9; measles, 2; and whooping-cough, 2.

MICHIGAN.—Week ended August 10, 1889. Reports to the State board of health, Lansing, from fifty-five observers, indicate that cholera infantum, cholera morbus, erysipelas, cerebro-spinal meningitis, enteric fever, and typho-malarial fever increased, and intermittent fever decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week, and since, at 12 places, scarlet fever at 9 places, enteric fever at 14 places, and measles at 5 places.

NEW HAMPSHIRE.—From the Sanitary Volunteer, which is the official organ of the New Hampshire State board of health, the following report of contagious and infectious diseases for the month of July is extracted:

Diphtheria: Nashua, 8 cases. This is just half the number reported from that city for the month of June. Total number reported since the first of May, 34—Manchester, 9; Claremont, 8; Rochester, 6; Belmont, 2; Milford, 2; and Concord, Stratham, North Hampton, Greenland, Berlin, and Goffstown, 1 case each.

Scarlet fever: Manchester, 75 cases, making 149 cases reported since May 18. In the report rendered by the board of health of Manchester for July, the secretary says: "We have placarded the houses in which the disease existed, distributed the pamphlets published by the State board of health, and have done what we could to secure isolation and disinfection. But the scarlet fever is so mild that some have no doctor and are not confined to the house; the disease is probably spread largely by such persons. Only 2 deaths have been reported from the disease thus far." Goffstown, 3; Concord, 4; and Boscawen, Belmont, and Bridgewater, 1 case each.

Typhoid fever: Boscawen, Concord, and Belmont, each 2 cases, and Salem, Pittsfield, and Goffstown, 1 case each.

One case of measles was reported from Manchester.

Dysenteric troubles were reported from several localities.

TENNESSEE—*Chattanooga.*—Month of July, 1889. Population, 40,000. Total deaths, 53, including enteric fever, 3.

Publications received.

Recueil des Travaux du Comité Consultatif d'Hygiène Publique de France, et des actes officiels de l'Administration Sanitaire. (Année, 1888.) Paris, 1889.

Twenty-second annual report of the health department of the city of Cincinnati. Cincinnati, 1889.

Mayor's message and annual reports of city officers. Dallas, Tex., 1889.

Boletin Mensual de estadistica Municipal de la Ciudad de Buenos Aíres. Mayo, 1889.

Annual report of the mayor, and accompanying documents, for the year 1888. Savannah, 1889.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Aug. 17	1,577,587	751	.....	.....	.....	.....	.....	.....	15	.....	22	1	12
Chicago, Ill.	Aug. 17	1,100,000	482	.....	.....	.....	.....	.....	.....	23	6	14	3	5
Brooklyn, N. Y.	Aug. 10	834,607	349	.....	.....	.....	.....	.....	.....	5	3	10	1	5
Brooklyn, N. Y.	Aug. 17	834,607	374	.....	.....	.....	.....	.....	.....	4	1	19	.....	7
Baltimore, Md.	Aug. 17	500,343	193	.....	.....	.....	.....	.....	.....	7	2	1	.....	1
St. Louis, Mo.	Aug. 17	450,000	154	.....	.....	.....	.....	.....	.....	5	4	6	.....	1
San Francisco, Cal.	Aug. 9	350,000	94	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	4
Cincinnati, Ohio.	Aug. 17	325,000	115	.....	.....	.....	.....	.....	.....	3	1	5	4	2
New Orleans, La.	Aug. 10	254,000	93	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....
Detroit, Mich.	Aug. 10	230,000	90	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Pittsburgh, Pa.	Aug. 17	230,000	85	.....	.....	1	.....	.....	.....	8	.....	3	3	.....
Rochester, N. Y.	Aug. 17	130,000	51	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	2
Providence, R. I.	Aug. 17	127,000	51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Denver, Colo.	Aug. 16	100,000	30	.....	.....	.....	.....	.....	.....	4	1	.....	.....	.....
Richmond, Va.	Aug. 10	100,000	49	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Richmond, Va.	Aug. 17	100,000	41	.....	.....	.....	.....	.....	.....	2	.....	2	.....	1
Toledo, Ohio.	Aug. 16	89,000	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fall River, Mass.	Aug. 17	69,000	44	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Nashville, Tenn.	Aug. 17	65,153	15	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Lynn, Mass.	Aug. 17	50,000	26	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Manchester, N. H.	Aug. 10	42,000	13	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Portland, Me.	Aug. 17	42,000	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa.	July 29	35,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa.	Aug. 10	35,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	Aug. 10	32,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Aug. 17	30,000	7	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Auburn, N. Y.	Aug. 17	26,000	10	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Haverhill, Mass.	Aug. 17	25,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Newport, R. I.	Aug. 15	22,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa.	Aug. 10	16,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Aug. 11	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Pensacola, Fla.	Aug. 10	15,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended August 3, corresponded to an annual rate of 20.5 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Portsmouth, viz, 10.6, and the highest in Sunderland, viz, 28.8 a thousand. Diphtheria caused 5 deaths in Manchester, 3 in Salford, and 3 in Sunderland.

London.—One thousand five hundred and thirty-two deaths were registered during the week, including measles, 25; scarlet fever, 11; diphtheria, 45; whooping-cough, 22; enteric fever, 8; diarrhœa and dysentery, 199, and cholera and choleraic diarrhœa, 4. The deaths from all causes corresponded to an annual rate of 18.4 a thousand. Diseases of the respiratory organs caused 182 deaths. In greater London 1,934 deaths were registered, corresponding to an annual rate of 17.9 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 64, and diphtheria, 9.

Scotland.—The deaths registered in 8 principal towns during the week ended August 3, corresponded to an annual rate of 18.3 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Dundee, viz, 12.4, and the highest in Paisley, viz, 27.4 a thousand. The aggregate number of deaths registered from all causes was 468, including measles, 8; scarlet fever, 4; diphtheria, 4; whooping-cough, 15; fever, 7, and diarrhœa, 39.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended August 3, in the 16 principal town districts of Ireland, was 21.1 a thousand of the population. The lowest rate was recorded in Sligo, viz, 4.8, and the highest in Drogheda, viz, 38.1 a thousand. In Dublin 140 deaths were registered, including measles, 4; enteric fever, 1; typhus, 1; diarrhœa, 7; dysentery, 1, and whooping-cough, 1.

FRANCE—*Bordeaux.*—Eight hundred and forty-five deaths were registered during the month of July, 1889, in a population of 375,378; including sporadic cholera, 2; small-pox, 11; enteric fever, 26; scarlet fever, 1; diphtheria and croup, 19; measles, 13; whooping-cough, 11, and diarrhœa and enteritis, 186.

BRAZIL—*Ceara.*—Month of June, 1889. Population, 29,000. Total deaths, 225. None from contagious diseases.

ARGENTINE REPUBLIC—*Buenos Ayres.*—Month of June, 1889. Population, 500,000. Total deaths, 1,237, including small-pox, 5; enteric

fever, 51; scarlet fever, 4, and diphtheria, 47. During the winter, thus far, diphtheria and enteric fever have been the prevailing diseases.

MEXICO.—*Tampico.—Report of Special Inspection.*—Repeated rumors having reached this Bureau that the southeastern coast of Texas was threatened by reason of the alleged existence of yellow fever in Tampico, on the Mexican coast, between the mouth of the Rio Grande and that State, Dr. F. J. Combe, of Brownsville, Tex., was employed to make a special inspection of the coast of Mexico as far as Tampico. The following is his report:

U. S. MARINE-HOSPITAL SERVICE,
DISTRICT OF THE GULF,
Port of Brownsville, Surgeon's Office, August 13, 1889.

Hon. SURGEON-GENERAL, *Washington, D. C.*:

SIR: I have the honor to forward the following report in reference to the rumored prevalence of yellow fever at Tampico, Mexico:

Pursuant to your telegraphic instructions of the 12th ultimo, I left Brownsville July 14 and proceeded overland to Tampico. My route lay almost due southeast, and mostly over a rough, mountainous country, frequently intersected by small rivers, which, being swollen, materially impeded my progress. Though I could not accurately ascertain the distance from Matamoras to Tampico, I would judge it to be, from my own calculation, not less than 420 Mexican miles.

This part of the country is very thinly populated. The people are almost exclusively engaged in stock-raising, but little attention being given to agriculture. I passed through the towns of San Fernando, Jiminez, Sota La Marina, and other small places, where I was required to present myself at their respective custom-houses for inspection.

These towns are but little more than aggregations of stone and adobe-built houses, systematically arranged. The lower class of people live in low thatched roof huts.

The population of any one of these places does not exceed 500 souls. This is the most healthful portion of the State, being on the gradually ascending slope of the table-lands of the Sierra Madre Mountains.

To all my inquiries regarding the diseases most prevalent in this section, I was met with the assurance that with the exception of an occasional visitation of small-pox, measles, and malaria, the people enjoyed exceptionally good health.

I arrived at Tampico July 24, and immediately proceeded to obtain all the information possible regarding the alleged prevalence of yellow fever there. My telegraphic report of the 28th ultimo, as well as my present communication, will, I think, dissipate the erroneous impressions which rumors may have established.

Tampico is situated 22° 16′ north latitude, and 1° 12′ east, longitude from the city of Mexico, being 306 miles from that place.

It is a port of entry on the Panuco River, and is the principal town of the southern district and municipality of Tampico. The city is 6 miles from the coast line. It is bounded on the north by Laguna del Carpintero; on the south and east by the Panuco River; and on the west partly by a low range of hills and by a stretch of swampy ground.

The topography of Tampico and its surroundings may much more be studied to advantage by the perusal of the map which I have this day forwarded to you.

This city has a population of about 7,000 inhabitants. It is quite a hilly town, 14 feet above the level of the sea. Its mean temperature is 77°. Winds, average direction, southeast and southwest. There is no regular system of drainage here, save through gutters, which are built in the middle of the street. This is effected by an inclination in the street of several inches, from the outer edge of the sidewalk to the middle of the thoroughfare. There is also a natural slope to the streets, of several feet, north to the lake and south to the Panuco River. They are paved with cobble-stones, and kept very clean.

The architecture is purely Mexican, the houses being massively built and only one or two stories high. All garbage is daily carted away, and thrown some distance to the leeward of the city. Privy-vaults are the means employed for the collection of human excreta; and as there are no outlets or mains, their filth is continually impregnating the subsoil strata. It is true that there are some houses which throw off their refuse through an underground system of pipes, but these are few and exceptional.

Drinking water is supplied to the inhabitants from cisterns and springs, mostly from the latter. According to an analysis made by a local pharmacist, its quality has been pronounced good. It is cool, clear, and palatable. River water is used by the poor classes.

Meat, fish, vegetables, and fruit, comprise the food of the inhabitants. Those who can not afford the first two mentioned articles of food, subsist upon the latter. I have passed along the wharves, which line the front of the city, and have seen natives making their morning meal of over-ripe and sometimes green fruit. This certainly is unhealthy, especially to those who are obliged to work in the swamps, or otherwise expose themselves to the malarial influence. These very same people are greatly addicted to the use of an alcoholic beverage called "agua dulce." The bad effects of the imbibition of quantities of this liquor makes itself apparent by the bloated countenance and enervating effects which it has upon the systems of the victims of this habit. I am told by a prominent railroad officer, who has had much experience among this class, that they are the first to succumb to exposure or sickness, especially when occupied in the marshy lowlands.

I have elsewhere made mention of the existence of malaria in this section, and I am of opinion that it was the extensive prevalence of the disease here this spring that gave rise to the false rumors which have been circulated in regard to yellow fever.

That this is a highly malarious location is beyond question. Paludal fevers prevail here throughout the entire year, though naturally with a cessation during the winter months. The scum-covered surface of Lake Carpintero, as well as the marshy banks of the Tamése River, afford a luxuriant nidus for the prolific development of the malarial germ. There are summer days when the heat is intense, rising in spite of the sea-breeze to 90° and 91°. This warm temperature, together with the miasms emitted from the decomposing vegetable matter and swampy ground, is apt to prostrate even the most hardy.

When we come to consider that in addition to these conditions favoring the development of the micro-organism these patients are often poorly fed and clad, and not unfrequently without medical attention,

it is not surprising that many of them sicken, not, as is supposed, from yellow fever, but from the ravages made upon their systems by this climatic fever, which, when neglected, often proves fatal.

Tampico possesses two hospitals, one a military, the other a civil, institution. The military hospital is governed by the military authorities; the civil hospital is under the supervision of the local board of health. At the time of my visit the hospitals were almost empty. The *clientelle* was composed principally of a few remittent, intermittent, and surgical cases, as well as one or two venereal cases.

Tampico's commercial relations are mostly limited to a Gulf coast trade, though an occasional American or European steamer may touch at this point.

This city is within the yellow-fever zone, and notwithstanding its proximity to, and constant communication with, Vera Cruz, where yellow fever is endemic, it is surprising, though nevertheless true, that since the epidemics of 1878 and 1879 yellow fever, with the exception of a few suspicious cases, has been a stranger here.

This I assert upon the assurance of the authorities, of the medical profession the board of health, and as the result of my individual investigations. I have studied this subject considerably, and have finally concluded that the seeming immunity of Tampico to yellow fever may be due to one or more of the following reasons:

(1) Vessels of even moderate tonnage can not enter the harbor, owing to the shallowness of the bar. (Soundings 4 to 5 feet.) They usually anchor in the offing, which is 4 miles off the bar and a distance of 10 miles from the city. When there is little or no communication with the shore this is almost complete isolation.

(2) In Vera Cruz vessels can not well come alongside the wharves, hence to a certain extent diminishing the probability of infection.

(3) The locality and surroundings may not altogether be a favorable habitat for the development of the germ.

I have just referred to the *seeming immunity* of Tampico to infection by yellow fever, and I would conclude by saying that though the city is in comparatively a good sanitary condition, and is at present free from yellow fever, yet, on account of its communication with infected ports, it daily exposes itself to a visitation from this much dreaded disease.

I would express my thanks to the authorities of Tampico, especially to our consul, Mr. Greathouse, and to Mr. Hitchcock, for the courtesy and assistance shown me.

Very respectfully, yours,

F. J. COMBE, M. D.

Acapulco.—Month of July, 1889. Total deaths, 21, including small-pox, 4.

CUBA.—*Santiago de Cuba.*—The United States consul furnishes the following sanitary report for first half of June, 1889:

Referring to my letter of the 7th instant, I beg to state that the municipal authorities, who had declared the existence of an epidemic of small-pox in this city, have acknowledged their action as premature. and declare such action only a means to frighten people into vaccination. This first half of the month has been healthy in the extreme.

The continuous heavy rains have wrought havoc among children, especially those of the colored race. Diseases and deaths are registered as follows: Varioloid and small-pox, 7 cases, 3 deaths, children; measles, 42 cases; dysentery, 24 cases, 3 deaths; diarrhœa, 36 cases, 4 deaths; yellow fever, in military hospital, 1 case, 1 death.

There is no yellow fever in the town, and the port is entirely clean. As there is not a single case of small-pox in the town to-day (June 21, 1889), I issue clean bills of health. For the last fifteen days I have mentioned the action of the municipality in declaring a small-pox epidemic on bills of health. This at present is unnecessary.

In his dispatch to the Department of State, dated July 27, 1889, the consul says:

The irregularity in sending sanitary reports is owing to the extreme difficulty of obtaining authentic health reports, as it very often takes weeks of application and constant notification to the local health authorities. Is it not possible to have a health inspector reappointed here? Such inspector would be of invaluable service to this consulate, and would be an absolute guard against the introduction into the United States of contagious diseases endemic to this island. The movement of steamers, especially English tramp steamers, taking principally iron ore from here to Philadelphia and Baltimore, is increasing in importance every day, and, if not properly supervised by a physician, is a constant menace to our public health, owing to the proximity of this island to our shores. I trust you will cause the advisability of appointing a health inspector at this port, to be considered.

Cardenas.—Week ended August 9, 1889. Weather warm. Regular rains. Health of town and bay good.

BAHAMAS—*Nassau, N. P.*—Week ended August 3, 1889. Population, 12,000. No prevailing diseases. General health of island very good.

DEMERARA—*Georgetown.*—Reports for the three weeks ended July 18, 1889, show that there have been no cases or deaths from contagious diseases during that period.

NETHERLANDS.—The deaths registered in the principal cities of the Netherlands, having an aggregate population of 1,129,678, during the month of May, 1889, corresponded to an annual rate of 23.0. The lowest rate was recorded in Arnhem, viz, 17, and the highest in Hertogenbosch, viz, 36.1 a thousand. The deaths included typhus and enteric fever, 8; scarlet fever, 5; measles, 55; whooping-cough, 22; and diphtheria, 14.

The consul-general of the Netherlands at New York informs the Department of State, under date of August 13, that—

At the request of the minister of foreign affairs at The Hague, I have the honor to inform you that the minister of the interior and of finance have thought proper to withdraw, on the 27th July last, the prohibition of the import and transit of rags, used wearing apparel, &c., from Sicily into the Netherlands.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Glasgow	Aug. 3	545,678	208	.....	.....	.....	.....	5	2	1	.....	.....
Calcutta	June 29	433,219	201	20	.....	.....	.....	.....	.....	.....	.....	.....
Rome	June 8	404,449	158	.....	.....	3	.....	4	.....	4	.....	.....
Rome	June 15	404,449	165	.....	.....	3	.....	2	.....	3	.....	.....
Amsterdam	Aug. 3	399,051	189	.....	.....	.....	.....	1	.....	5	.....	.....
Copenhagen	July 27	307,000	165	.....	.....	.....	.....	4	.....	7	.....	.....
Munich	June 22	281,000	179	.....	.....	.....	.....	.....	.....	6	.....	.....
Munich	June 29	281,000	157	.....	.....	.....	.....	.....	3	2	.....	.....
Munich	July 6	281,000	174	.....	.....	.....	.....	2	1	13	.....	.....
Munich	July 13	281,000	235	.....	.....	.....	.....	3	4	5	.....	.....
Edinburgh	July 27	266,900	77	.....	.....	.....	.....	.....	.....	1	.....	.....
Trieste	July 27	154,500	69	.....	.....	.....	.....	.....	.....	1	.....	.....
Stuttgart	Aug. 3	125,510	41	.....	.....	.....	.....	.....	2	1	.....	.....
Pernambuco	July 16	120,000	52	.....	1	.....	.....	1	1	.....	.....	.....
Pernambuco	July 23	120,000	98	.....	.....	.....	1	1	2	.....	.....	.....
Barmen	July 27	109,000	68	.....	.....	.....	1	.....	.....	.....	4	.....
Barmen	Aug. 3	109,000	50	.....	.....	.....	1	.....	.....	3	.....	.....
Catania	July 29	108,000	22	.....	.....	.....	.....	.....	2	.....	.....	.....
Mayence	July 20	65,802	36	.....	.....	.....	.....	.....	1	.....	.....	.....
Leith	July 27	76,400	25	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	July 9	47,448	42	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	July 16	47,448	38	.....	.....	.....	.....	1	.....	.....	.....	.....
Merida	July 23	47,448	52	.....	.....	.....	.....	.....	1	.....	.....	.....
Merida	July 30	47,448	56	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	July 9	35,000	97	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	July 16	35,000	92	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	July 23	35,000	84	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Aug. 8	28,800	26	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	July 28	23,561	10	.....	.....	.....	.....	.....	1	.....	.....	.....
Cartagena, Colombia	July 27	20,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can.	Aug. 9	17,300	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	July 19	13,500	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	July 26	13,500	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Aug. 2	13,500	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	July 27	7,428	4	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 35. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., August 30, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended August 30, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.

UNITED STATES.

Reports from National Quarantine Stations.

CAPE CHARLES, VA.—During the week ended August 23, there were 15 vessels spoken and 3 inspected. The British steamer Parthian, from Mobile, was detained for fumigation.

DELAWARE BREAKWATER, DEL.—The ship John A. Briggs, mentioned in Abstract No. 34, current series, was cleansed, disinfected, and allowed to proceed to the lazaretto at Philadelphia in accordance with the request of the health officer. Six vessels were inspected.

GULF QUARANTINE (NORTH CHANDELEUR ISLAND), LA.—The Norwegian bark Safir was discharged August 19. The American schooner Charlotte, from Vera Cruz, and the British ships Prince Amadeo and Frank Carville, from Rio de Janeiro, arrived during the week. They were held for disinfection, and the Charlotte was discharged August 21.

PORT TOWNSEND, WASH.—Seven steamers and 1 schooner were inspected for the two weeks ended August 17.

SAN DIEGO, CAL.—Three vessels inspected for the week ended August 17, and 3 for the period ended August 21, 1889.

Acting Assistant Surgeon McKay, in charge of this station, reports as follows under date of August 21, 1889:

The past ten days have been noted for an unusually high temperature for this port, the mean average being 73°, which was followed on the 16th instant by a rain accompanied with thunder and lightning; rain commencing to fall about 10 a. m. and lasting until 2.15 p. m. The rain-fall amounted to .04 of an inch, a very rare occurrence for this region at this time of the year, the atmosphere being very heavy and sultry with no sea-breeze whatever. All the wharves in the harbor are constructed on wooden piles driven closely together, and near by, the sewers of the city empty into a large tank which is supposed to be flushed and

cleansed by the tides. A great deal of matter, however, collects in the bottom of the tank which is not washed out by the tides, consequently when left bare in the hot sun, at low tide, a most offensive and sickening effluvia arises therefrom. The shipping lying at the wharves being to the southward, the northwest trade winds that prevail here during the summer distribute this poisonous effluvia pretty thoroughly among them, to say nothing of the obstruction to the cleansing action of the tides offered by the piling on which the wharves are built. It can easily be surmised what would be the effect of such unsanitary condition of this part of the harbor should there be an introduction of infectious diseases following a temperature and moisture similar to that of the past week. Attention having been called to these facts, the local health authorities are taking measures to remedy the evil as soon as practicable.

Reports of States, and Yearly and Monthly Reports of Cities.

ALABAMA.—*Mobile.*—Month of July, 1889. Population, 40,000. Total deaths, 78, including enteric fever, 2.

MICHIGAN.—Week ended August 17, 1889. Reports to the State board of health, Lansing, from 52 observers, indicate that dysentery, intermittent fever, and inflammation of the brain increased, and rheumatism, neuralgia, and cholera morbus decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week, and since, at 8 places; scarlet fever at 6 places; enteric fever at 14 places, and measles at 3 places.

Detroit.—Month of July, 1889. Population, 250,000. Total deaths, 442, including diphtheria, 5; enteric fever, 4; measles, 1; whooping-cough, 1; and scarlet fever, 1.

MINNESOTA.—*Minneapolis.*—Month of July, 1889. Population, 180,000. Total deaths, 247, including enteric fever, 3; diphtheria, 11; scarlet fever, 1; and whooping-cough, 1.

RHODE ISLAND.—From the Monthly Bulletin for July the following is extracted:

Reports in relation to sickness during July, 1889, have been received from all parts of the State, including nearly every town, and indicate a considerably increased amount as compared with the preceding month.

Pneumonia had occurred in a few cases only. Bronchitis had prevailed to a larger extent than usual, for the season, but had lessened considerably in numbers from the previous month. Diarrhœal and others intestinal diseases had greatly increased. Diphtheria was prevalent in Johnston, Woonsocket, and Providence City in considerable numbers, but was reported from only two other locations in the State.

Scarlet fever and typhoid fever had scarcely any prevalence. Cholera infantum had gradually increased in prevalence during the month in nearly half the towns, but was not unusually severe.

Measles had an epidemic prevalence in Hopkinton, and a large prevalence in East Providence, Johnston, and West Scituate.

Whooping-cough was reported from nearly half the towns in the State, usually of a mild type. Malarial diseases not unusually frequent. The reports indicate, that as compared with the corresponding month in 1888, the amount of general sickness in July, 1889, was about the same.

The mortality from diarrhœal diseases during the corresponding month in 1888, as compared in numbers with 1889, was as follows:

	1888.	1889.
Cholera infantum	125	124
Cholera morbus	6	11
Diarrhœa	17	33
Dysentery	18	7
Enteritis, gastro and colo	9	12
Total	175	187

With the increase of population the proportions are not far different.

Publications received.

Twelfth annual report of the health commissioner, city of St. Louis, Mo., 1888–'89.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Aug. 23	1,578,485	769	.....	.....	.....	.....	.....	.....	20	2	15	1	6
Chicago, Ill.	Aug. 24	1,100,000	436	.....	.....	.....	.....	.....	.....	15	2	16	2	4
Philadelphia, Pa.	Aug. 17	1,040,245	389	.....	.....	.....	.....	.....	1	17	4	7	.....	2
Brooklyn, N. Y.	Aug. 24	834,607	343	.....	.....	.....	.....	.....	.....	9	2	12	.....	5
St. Louis, Mo.	Aug. 24	450,000	155	.....	.....	.....	.....	.....	.....	9	2	4	.....	.....
Cincinnati, Ohio	Aug. 24	325,000	115	.....	.....	.....	.....	.....	.....	6	1	10	2	1
New Orleans, La.	Aug. 17	254,000	97	.....	.....	.....	.....	.....	.....	1	.....	7	.....	.....
Detroit, Mich.	Aug. 17	230,000	74	.....	.....	.....	.....	.....	.....	1	.....	5	.....	1
Pittsburgh, Pa.	Aug. 24	230,000	95	.....	.....	.....	.....	.....	.....	6	2	5	2	.....
Minneapolis, Minn.	Aug. 17	200,000	37	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Kansas City, Mo.	Aug. 17	180,000	38	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
Kansas City, Mo.	Aug. 24	180,000	28	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Providence, R. I.	Aug. 24	127,000	43	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Indianapolis, Ind.	Aug. 24	124,450	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond, Va.	Aug. 24	100,000	43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Denver, Colo.	Aug. 23	100,000	38	.....	.....	.....	.....	.....	.....	7	.....	.....	.....	2
Fall River, Mass.	Aug. 24	69,000	41	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Nashville, Tenn.	Aug. 24	65,153	28	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....
Charleston, S. C.	Aug. 17	60,145	54	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	Aug. 24	60,145	60	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	Aug. 24	50,000	18	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Portland, Me.	Aug. 24	42,000	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Aug. 17	42,000	14	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Galveston, Tex.	Aug. 9	40,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Aug. 16	40,000	15	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
San Diego, Cal.	Aug. 17	32,000	2	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
San Diego, Cal.	Aug. 21	32,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	Aug. 17	30,000	11	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Binghamton, N. Y.	Aug. 24	30,000	7	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Auburn, N. Y.	Aug. 24	26,000	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Haverhill, Mass.	Aug. 24	25,000	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Newport, R. I.	Aug. 22	22,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	Aug. 17	16,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	Aug. 24	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Aug. 18	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended August 10, corresponded to an annual rate of 18.8 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Oldham, viz, 13.9, and the highest in Preston, viz, 34.6 a thousand. Diphtheria caused 2 deaths in Manchester, 2 in Birmingham, and 2 in Plymouth.

London.—One thousand three hundred and sixty-five deaths were registered during the week, including measles, 15; scarlet fever, 16; diphtheria, 28; whooping-cough, 19; typhus, 2; enteric fever, 6; diarrhœa and dysentery, 175, and cholera and choleraic diarrhœa, 4. The deaths from all causes corresponded to an annual rate of 16.4 a thousand. Diseases of the respiratory organs caused 149 deaths. In greater London 1,705 deaths were registered, corresponding to an annual rate of 15.8 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 50, and diphtheria, 3.

Scotland.—The deaths registered in 8 principal towns during the week ended August 10, corresponded to an annual rate of 18.6 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Edinburgh, Aberdeen, and Leith, viz, 15.0, and the highest in Paisley, viz, 30.8 a thousand. The aggregate number of deaths registered from all causes was 475, including small-pox, 1; measles, 10; scarlet fever, 2; diphtheria, 7; whooping-cough, 24; fever, 7, and diarrhœa, 57.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended August 10, in the 16 principal town districts of Ireland, was 22.9 a thousand of the population. The lowest rate was recorded in Lisburn viz, 0.0, and the highest in Newry, viz, 35.1 a thousand. In Dublin 168 deaths were registered, including measles, 3; enteric fever, 1; diarrhœa, 15; and whooping-cough, 4.

During the quarter ended June 30, there were 21,095 deaths registered in Ireland, corresponding to an annual rate of 17.8 a thousand of the population. Measles was very fatal in a few districts, and whooping-cough in a larger number, but no zymotic disease was prevalent throughout the country. There have been no deaths from small-pox since the first quarter of 1888. The deaths for the quarter included measles, 142; scarlet fever, 81; typhus, 81; whooping-cough, 344; diphtheria, 80; enteric fever, 162; diarrhœa, 199; and simple cholera, 3.

Gibraltar.—The following notice is published:

AUGUST 1, 1889.—The Board of Trade, at a meeting held this day, decided to withdraw the quarantine now imposed at this port on arrival from the Brazils.

By order—

I. C. KING,
Secretary to the Board of Health.

FRANCE—*Bordeaux.*—Month of July, 1889. Population, 240,582. Total deaths, 400, including enteric fever, 6, and diphtheria, 11.

BRAZIL—*Bahia.*—The United States consul, in his dispatch, dated July 25, 1889, reports the sanitary condition of the city and adjacent country as good.

Paramaribo.—Month of June, 1889. Population, 27,593. Total deaths, 72. None from contagious diseases.

DEMERARA—*Georgetown.*—Month of June, 1889. Population, 56,000. Total deaths, 145. None from contagious diseases. The United States consul states, under date of July 25, that—

Leprosy, now generally believed to be contagious, is thought to be slowly increasing in the colony, but the death rate is so small that the mortuary statistics give no adequate idea of its prevalence.

CUBA—*Cardenas.*—August 16, 1889. The usual summer weather prevails. Good health in town and harbor.

Havana.—Week ended August 16, 1889. Nineteen deaths from yellow fever.

UNITED STATES OF COLOMBIA—*Colon.*—The Department of State was advised by telegram of the United States consul at Colon, that the steamer Adirondack had left that port for the United States with yellow fever on board. The consul did not state the port to which the Adirondack is destined.

ITALY—*Rome.*—The United States vice-consul-general, in his dispatch, dated August 3, 1889, says:

I have the honor to submit herewith two statements relating to public health, one of which concerns the Kingdom of Italy for the half year ended June 30, 1889, and the other the province of Rome for the month of June, 1889.

These statements are compiled from the reports of mayors made to the minister of the interior. However, for the month of June last, out of a total of 8,257 communes, the mayors of 1,603 failed to make returns. On December 31, 1888, latest estimate, the aggregate population of these 8,257 communes making up the Kingdom was officially placed at 30,565,253 inhabitants.

The municipal authorities of Rome have published no health statistics later than June 1 last, but from unofficial information I am glad to state that the health of the city and surrounding country continues to be excellent.

I.—*Sanitary bulletin of the Kingdom of Italy for the six months ended June 30, 1889.*

Months.	Number of communes— Which reported infectious diseases.	Which sent negative reports.	Which sent no reports.	Number of physicians and surgeons practicing in communes— Who reported cases of infectious diseases.	Who sent no reports or sent negative ones.	Total.	Number of physicians and surgeons who reported cases of disease.	Number of cases reported during the month. Small-pox.	Measles.	Scarlet fever.	Diphtheria.	Typhoid fever.	Typhus fever.	Puerperal fever.
January	2,251	4,663	1,343	10,301	7,267	17,568	4,884	5,146	15,218	3,692	3,431	3,126	160	752
February	2,256	4,743	1,258	10,559	7,009	17,568	4,677	4,272	13,978	2,977	3,157	2,661	110	752
March	2,351	4,743	1,163	10,603	6,965	17,568	4,902	4,210	15,551	3,266	2,985	2,868	138	849
April	2,222	4,800	1,235	10,312	7,256	17,568	4,837	3,749	18,321	3,812	2,480	2,882	170	687
May	2,127	4,644	1,486	10,028	7,540	17,568	4,431	3,819	16,645	3,010	2,256	2,813	120	625
June.... 1889	1,922	4,732	1,603	9,756	7,812	17,568	4,168	2,832	13,366	2,687	2,023	3,150	159	543
June.... 1888	2,455	5,186	613	10,925	6,643	17,568	5,209	4,795	23,896	3,609	2,953	3,621	204	606

II.—*Sanitary bulletin of the province of Rome (Latium) for the month ended June 30, 1889.*

Districts or circuits making up the province of Rome.	Population on December 31, 1887.	No. of communes— Total in the district.	Which reported infectious diseases.	Number of physicians and surgeons. Total for district.	Total in communes reporting cases of disease.	Who reported cases.	Number of cases reported during the month. Small-pox.	Measles.	Scarlet fever.	Diphtheria.	Typhoid fever.	Typhus fever.	Puerperal fever.	No. of communes— Which made negative reports.	Which made no reports.
Rome	507,504	98	19	506	504	69	26	217	139	17	35	.....	2	60	19
Civita Vecchia	30,549	7	2	19	4	3	.....	.....	1	.....	1	.....	.....	4	1
Frosinone	159,510	43	11	70	17	16	27	4	2	6	60	3	3	26	6
Velletri	78,752	18	7	36	21	16	9	545	1	7	17	5	3	10	1
Viterbo	170,779	61	17	97	41	36	1	22	16	35	19	.....	3	35	9

Communes in which were reported a greater number of cases of the diseases quoted.

Small-pox:
- Alatri 6
- M. S. Giovanni di Campagna 14
- Sqrgola 6
- Rome 26
- Velletri 6

Measles:
- Rome 70
- Torita Tiburtina 85
- Sezze 500
- Velletri 40
- Orte 25

Scarlet fever:
- Vallimfreda 130
- Marta 5
- Viterbo 9

Typhoid fever:
- Trevi 45
- Rocco Priora 18
- Rome 9
- Velletri 12
- Marta 4

Typhus fever:
- Velletri 5

Diphtheria:
- Spingola 4
- Rome 15
- Velletri 4
- Marta 8
- Montefiascone 12
- Viterbo 6

Puerperal fever:
- Alatri 3
- Velletri 3

BAHAMAS—*Nassau, N. P.*—Week ended August 17, 1889. Population, 12,000. Number of deaths, not reported. No prevailing diseases. General health, very good.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Aug. 3	5,642,015	1,934	.....	.....	.....	.....	8	12	.....	29	.....
London	Aug. 10	5,642,015	1,705	.....	.....	.....	.....	6	18	31	15	28
Paris	Aug. 3	2,260,945	1,058	.....	.....	3	.....	36	10	26	15	11
Paris	Aug. 10	2,260,945	972	.....	.....	.....	.....	38	8	27	15	11
Glasgow	Aug. 10	545,678	213	.....	.....	.....	.....	5	2	3	.....	.....
Calcutta	July 6	433,219	223	24	.....	.....	.....	.....	.....	.....	.....	.....
Calcutta	July 13	433,219	215	17	.....	.....	.....	.....	.....	.....	.....	.....
Warsaw	July 27	445,770	288	.....	.....	6	.....	.....	3	9	.....	.....
Warsaw	Aug. 3	445,771	296	.....	.....	7	.....	.....	7	7	.....	.....
Rome	June 22	404,449	167	.....	.....	.....	.....	4	1	8	.....	.....
Rome	June 29	404,449	171	.....	.....	1	.....	1	.....	3	.....	.....
Amsterdam	Aug. 10	399,051	153	.....	.....	.....	.....	.....	1	2	.....	.....
Copenhagen	Aug. 3	307,000	184	.....	.....	.....	.....	2	1	7	.....	.....
Edinburgh	Aug. 3	266,900	88	.....	.....	.....	.....	1	.....	1	.....	.....
Palermo	Aug. 10	250,000	89	.....	.....	.....	.....	.....	2	1	.....	.....
Bristol	July 27	229,361	72	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bristol	Aug. 3	229,361	69	.....	.....	.....	.....	2	.....	.....	.....	.....
Bristol	Aug. 10	229,361	68	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belfast	Aug. 3	229,622	114	.....	.....	.....	.....	2	1	.....	.....	.....
Rotterdam	Aug. 10	197,724	82	.....	.....	.....	.....	.....	.....	.....	2	.....
Genoa	Aug. 3	180,156	93	.....	.....	.....	1	1	.....	.....	.....	.....
Genoa	Aug. 10	180,169	89	.....	.....	.....	2	.....	.....	1	.....	.....
Trieste	Aug. 10	154,500	73	.....	.....	.....	.....	1	.....	3	.....	.....
Stuttgart	Aug. 10	125,510	46	.....	.....	.....	.....	.....	.....	1	.....	.....
Havre	Aug. 10	112,074	65	.....	.....	1	.....	2	1	1	1	1
Barmen	Aug. 10	109,000	38	.....	.....	.....	.....	.....	.....	1	2	1
Catania	Aug. 4	108,000	50	.....	.....	.....	.....	1	2	2	.....	.....
Catania	Aug. 12	108,000	42	.....	.....	.....	.....	1	.....	2	.....	.....
Leghorn	Aug. 4	103,142	31	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leghorn	Aug. 11	103,142	38	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rheims	Aug. 10	97,903	49	.....	.....	.....	.....	.....	1	.....	1	.....
Leith	Aug. 3	76,400	37	.....	.....	.....	.....	1	1	1	.....	.....
Mayence	July 27	65,802	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Aug. 3	65,802	35	.....	.....	.....	1	.....	.....	2	.....	.....
Cadiz	Aug. 3	65,028	42	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Aug. 10	65,028	50	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cienfuegos	Aug. 12	40,655	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	July 31	35,000	75	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Aug. 7	35,000	55	.....	.....	.....	.....	1	.....	.....	.....	.....
Vera Cruz	Aug. 15	23,800	18	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Aug. 4	23,681	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Colombia	Aug. 3	20,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Aug. 16	17,300	19	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Aug. 23	17,300	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	July 13	15,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	July 20	15,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	July 27	15,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	Aug. 3	15,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	Aug. 3	7,428	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	Aug. 10	7,428	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ruatan	Aug. 3	1,500	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ruatan	Aug. 10	1,500	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 36. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., September 6, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended September 6, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.

UNITED STATES.

Reports from National Quarantine Stations.

CAPE CHARLES, VA.—During the week ended August 30, there were 28 vessels spoken, 4 inspected, and 1 fumigated. The British steamship Klyde, from Mobile, had 18 of her crew convalescent from malarial fever. American schooner Hamcomb, eight days from Mobile, reports that her crew were attacked with malaria fever at that place.

GULF QUARANTINE (NORTH CHANDELEUR ISLAND), LA.—The Spanish bark Maria was discharged August 23, and the Norwegian bark Southern Queen, August 28. The American schooner Ella Andrews arrived August 29 from Vera Cruz, and was held for disinfection.

SAN DIEGO, CAL.—During the week ended August 28, there were 3 vessels inspected.

A preliminary report on Weigert's treatment for phthisis pulmonalis.

By J. J. KINYOUN, Assistant Surgeon, M. H. S.

On the 1st of June, 1889, a Weigert's hot-air apparatus for the treatment of phthisis was received, and its use began at once; two cases were selected from the number in the hospital; these were, clinically, parallel cases, each presenting about the same physical signs; in neither case were there night sweats nor pyrexia. After several preliminary trials, observations on the treatment were recorded; special attention being paid to the directions accompanying the apparatus.

Both were typical cases of tubercle of lung, having all the physical signs, and by microscopical examination, the sputum was found to contain bacilli in abundance.

The administration to each case was given at about the same time each day. The temperature of the inspired air, at the commencement, was never less than 100° C., and after inspiration for one minute, it usually rose to 180° to 240°. Observations were made on the temperature at intervals of ten minutes. By a special arrangement devised by myself, a thermometer was placed at the expiratory valve, so that the temperature of the expired air could be registered; it was demonstrated that there was a fixed ratio between the inspired and expired air; when the inspired air registered 200° to 230° the expired air was 65° to 75°.

The high temperature secured was partly dependent upon the rapidity and quantity inspired; *i. e.*, the greater the lung capacity, the higher the temperature. As much depended upon this factor as upon the size of the flame. In several instances both patients complained of the intolerable dryness of throat and mouth; this was particularly noticed when the weather was damp, but as a rule the treatment was well borne. The following cases were taken:

CASE I. George Emery; 53 years; native of Maine; was admitted to Marine Hospital, New York in 1887; had been ill for two years prior to that time.

Condition on June 7, 1889.—Suffers greatly from dyspnœa; has a cough which troubles him, mostly in the morning soon after rising; expectorates a considerable quantity of muco-purulent material; has no night sweats nor pyrexia; bowels, as a rule, constipated.

Physical examination.—Inspection showed the chest flat superiorly and anteriorly; more noticeable on the right side; the right scapula is drawn in toward the median line; chest measurement just above nipple, on forced expiration, 30 inches; forced inspiration, 31¾ inches; difference of 1¾ inches.

Percussion.—Over the right apex, dullness amounting almost to flatness, which extends downward about 2 inches on the anterior portion of lung; left side, dullness at apex, diminution from above downward.

Auscultation.—Cavernous breathing heard over the right apex, accompanied by moist râles; small crepitant and subcrepitant râles over the entire side; on left side, vocal resonance increased, crepitant and subcrepitant râles over the entire lung. Sputum contains large number of bacilli.

On June 9 Weigert's treatment was commenced; time, thirty minutes at first, increasing ten minutes each day until an hour was reached. The temperature of the inspired air was from 120° to 230° C., and the expired, 65° to 80°. Weight, 95½ pounds.

June 20. He states that he has less cough, and the expectoration is diminishing; sleeps better at night, and does not suffer so much from dyspnœa; appetite shows no improvement; expansion of the chest has increased ½ inch; weight, 92 pounds.

July 2. Appetite improving; no increase in weight.

August 1. For the past month he has had the treatment for one hour each day consecutively, and for the past week has been troubled with constant headache, which does not yield to treatment.

August 3. Treatment discontinued for two days; renewed on August 5, and continued for one week, when it had to be abandoned, as it caused great fatigue, and also several paroxysms of coughing. Present condition: chest expansion, 2½ inches; weight, 92½ pounds; average temperature of the inspired air, 180° to 230°, expired air, between 65° and 75°. There has been from ⅔ to 1° difference in the body temperature at each treatment, accompanied by increased frequency of the pulse and diminution in number of respirations per minute. (*Vide* Chart I.)

CASE II. Frank Wall; aet 29 years; Norway; was admitted to U. S. Marine Hospital, New York, on April 12, 1889. Patient gives a history of illness for one year previous to admission; of having had a cough, night sweats, and profuse expectoration; had no hemorrhage; he is emaciated; has no appetite; coughs a great deal during the night, and has a distressing dyspnœa; there is a sinking in of the infra and supra clavicular spaces.

Percussion.—Dullness over both apices, increasing from above downward.

Auscultation.—Bronchial breathing at both apices; cavernous at the left; broncho-vesicular respiration extending downward to both nipples; a slight friction sound heard over the inferior and lateral portion of the left lung; crepitant and subcrepitant râles over the entire chest. Prior to beginning of treatment he had been on a liberal diet; tonics and sedatives administered to allay the cough.

June 14. *Physical examination* shows about same condition as formerly; disseminated râles over the chest; forced expiration, 32¾ inches; inspiration, 33¼ inches; weight, 115 pounds. To-day Weigert's treatment commenced, beginning with thirty-five minutes, increasing ten minutes each day until an hour was reached.

June 19. His cough is not so troublesome at night; sleeps better, and suffers less with shortness of breath; appetite fair.

June 23. During the last ten days he has lost 3 pounds; cough has diminished, and expectoration is less.

July 5. At each seance for the past three days he has been troubled with cough, and expectorates a considerable quantity of mucus; otherwise, he is doing quite well.

July 12. He states that he is feeling so much improved that he would like to have his discharge; he was advised to continue treatment for awhile longer, but refused; his present condition is as follows: There has been no diminution of the area of consolidation; slight increase of the râles over the apices; a decrease of mucous râles in lower lobes of both lungs; sputum shows enormous numbers of bacilli; expansion of the chest has increased to 35 inches—a gain of $\frac{1}{8}$ inch.

NOTE.—August 12. Patient readmitted. Since his discharge, one month ago, he has rapidly grown worse; greatly emaciated, profuse expectoration, and severe diarrhœa; both apices are breaking down; lungs with moist râles; temperature of the inspired air, 180° to 240°; expired air, 60° to 75°. A constant rise of from $\frac{3}{5}$ to 1° body temperature at each treatment, acceleration of the pulse, and diminution of respirations per minute. (*Vide* Chart II.) In connection with the treatment of above cases, a control experiment was made by having another patient use the apparatus, inspiring cold air instead of the heated; the inhalations were made under precisely the same conditions, viz, the rectal temperature, pulse, and respiration taken at commencement and close of each hour.

CASE III. *Control.*—Peter Johnson; aet 29; Norwegian; admitted to Marine Hospital, New York, February 8, 1889.

Previous history.—Was ill six months before admission, his chief ailment being a severe pain in the left side, accompanied by a cough and considerable expectoration.

Present condition.—June 19, 1889. Considerable emaciation; cough troublesome in the mornings; has distressing dyspnœa on slightest exertion.

Physical examination reveals consolidation of both apices, with moist and crepitant râles disseminated over both lungs; has had no sweats nor pyrexia for some time past. There is considerable difference between the expansion of right and left sides, that of the right being greater. Expansion of the chest, forced expiration, 32½ inches; forced inspiration, 33⅝ inches; difference, 1⅛ inches. Weight, 126 pounds.

June 19. *Cold-air treatment* commenced, beginning with thirty-five minutes, and increasing ten minutes each day until one hour was reached.

June 29. He states that he sleeps better at night, his cough is less troublesome, and the dyspnœa not so annoying. Chest, 32½ inches

and 34 inches; difference, 1½ inches. Weight, 126 pounds. Appetite improved.

July 10. Condition unchanged, except that there are fewer râles over both lungs.

July 19. Chest measurement the same; weight, 124½ pounds. He now coughs less, sleeps well, dyspnœa improved, and appetite fair. Examination shows the tubercular infiltration to be about the same; the mucous râles have disappeared from lower portion of the chest; there has been a rise each time in the rectal temperature of from ⅔ to 1°; a diminution of the pulse; little or no effect on respirations. (*Vide* Chart III.)

CASE IV. Patrick Tracy, admitted to U. S. Marine Hospital, New York, April 19, 1889, under diagnosis of acute pneumonic phthisis; was discharged May 10, readmitted on July 10, 1889. He then complained of short breath, persistent cough, and profuse expectoration; been losing flesh rapidly during past two months; has night sweats.

Physical condition.—There is marked dullness posteriorly over a circumscribed area of the upper portions of both lungs; anteriorly, the dullness was slight; expiratory sounds prolonged; bronchial breathing at both apices; a small cavity in the right, and general consolidation of the left; mucous râles heard over both lungs.

July 14. Chest expansion 34 and 32¾; weight, 120 pounds; pulse, 130; respiration, 35. Weigert's method commenced, with forty-five minutes, fifteen minutes increase to an hour.

July 18. Coughs about the same; expectoration has increased; has less dyspnœa; appetite poor.

July 24. Has lost 8 pounds since beginning of treatment.

July 26. Night sweats have ceased; cough some better; expectoration less; dyspnœa, slightly better than a week ago; he now complains of soreness over both lungs.

July 30. A slight hemorrhage this morning. Weigert's treatment discontinued.

August 8. During the past week he has been improving; sleeps well; cough and expectoration less.

Physical examination shows bronchial breathing over the consolidated areas; over a small area near the cavity a few crepitant râles were heard. Weight, 112 pounds; chest expansion, 33 to 35 inches; difference, 2 inches.

For fifteen consecutive days he has had Weigert's treatment; inhalations could not be taken more than an hour, on account of increased

attacks of coughing. There was an amelioration of the distressing symptoms, but no diminution of the area of consolidation. Temperature of the inspired air ranged between 200° to 240°. The expired was 65° to 75°. Constant rise in rectal temperature of $\frac{2}{5}$ to 1°. Acceleration of pulse; slight increase of respiration. Patient requests his discharge.

In the three cases receiving the hot-air treatment there was a notable improvement in the acute symptoms proportionate to the increased chest expansion. It is questionable whether the high temperature of the air has any effect upon the tubercular process. There is a possibility that the bacilli that are free within the bronchi are destroyed.

In Case III, used as a control to Cases I and II, there was the same improvement noted: the increase of the bodily temperature, acceleration of pulse, and respirations being the same in each, thereby indicating that the improvement was not due to the high temperature of the inspired air.

More extended observations will be made upon other cases in hopes of obtaining more satisfactory results.

Reports of States, and Yearly and Monthly Reports of Cities.

FLORIDA—*Pensacola.*—Month of August, 1889. Population, 15,000. Total deaths, 24, including measles, 1, and enteric fever, 2.

MASSACHUSETTS—*Newton*—Month of July, 1889. Population, 21,553. Total deaths, 28, including enteric fever, 1.

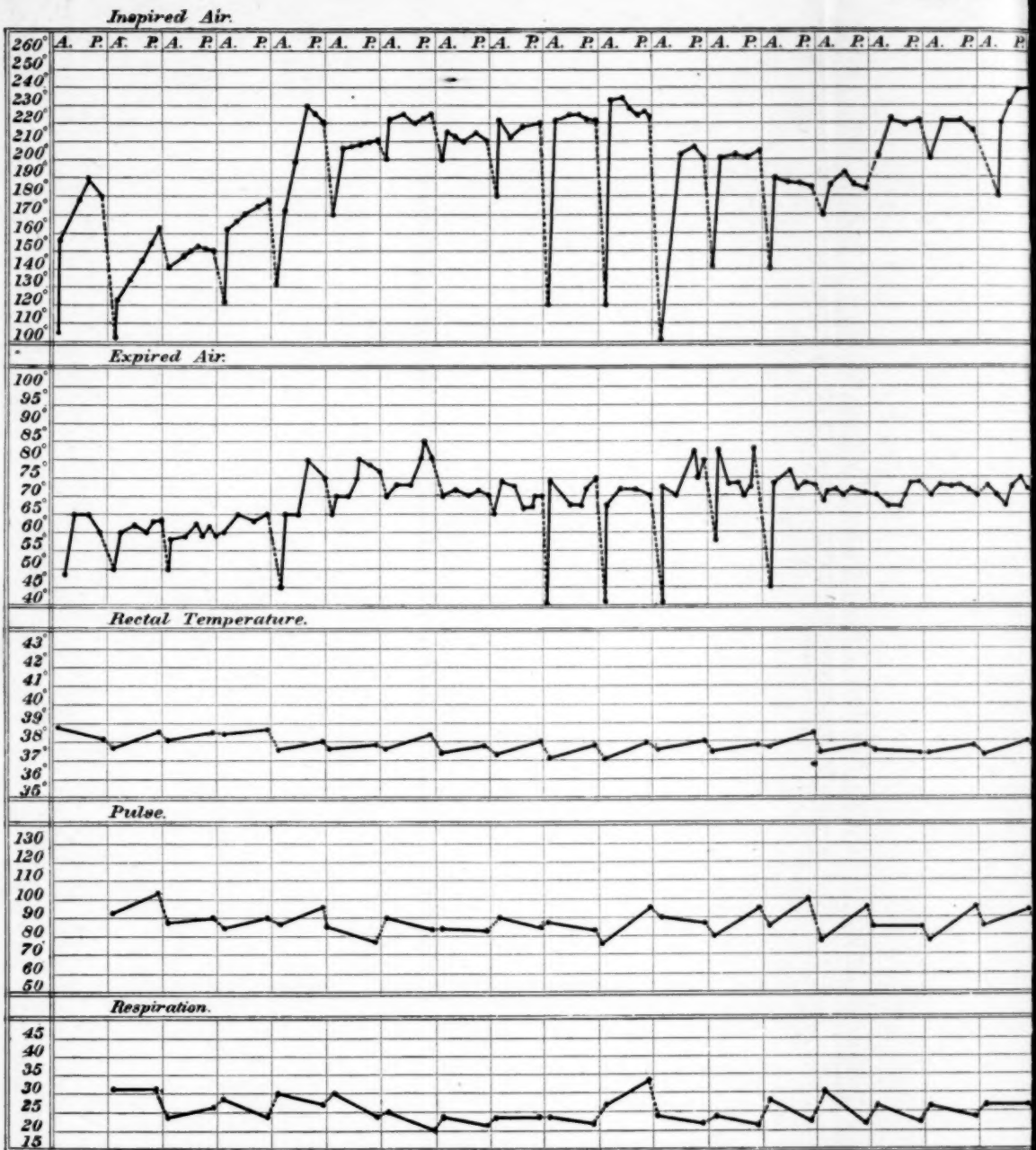
MICHIGAN.—Reports to the State board of health. Lansing, during the week ended August 24, 1889, from 54 observers, indicate that rheumatism, cholera morbus, typho-malarial fever, and pneumonia increased, and inflammation of brain and cholera infantum decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week, and since, at 7 places, scarlet fever at 8 places, enteric fever at 11 places, and measles at 3 places.

NEW HAMPSHIRE—*Manchester.*—Month of June, 1889. Population, 42,000. Total deaths, 76; none from contagious diseases. Six cases of diphtheria, 63 of scarlet fever, 1 of enteric fever, and 2 of measles were reported during the month.

Month of July, 1889. Total deaths, 82, including scarlet fever, 2. Nine cases of diphtheria, 76 of scarlet fever, and 1 of measles were reported during the month.

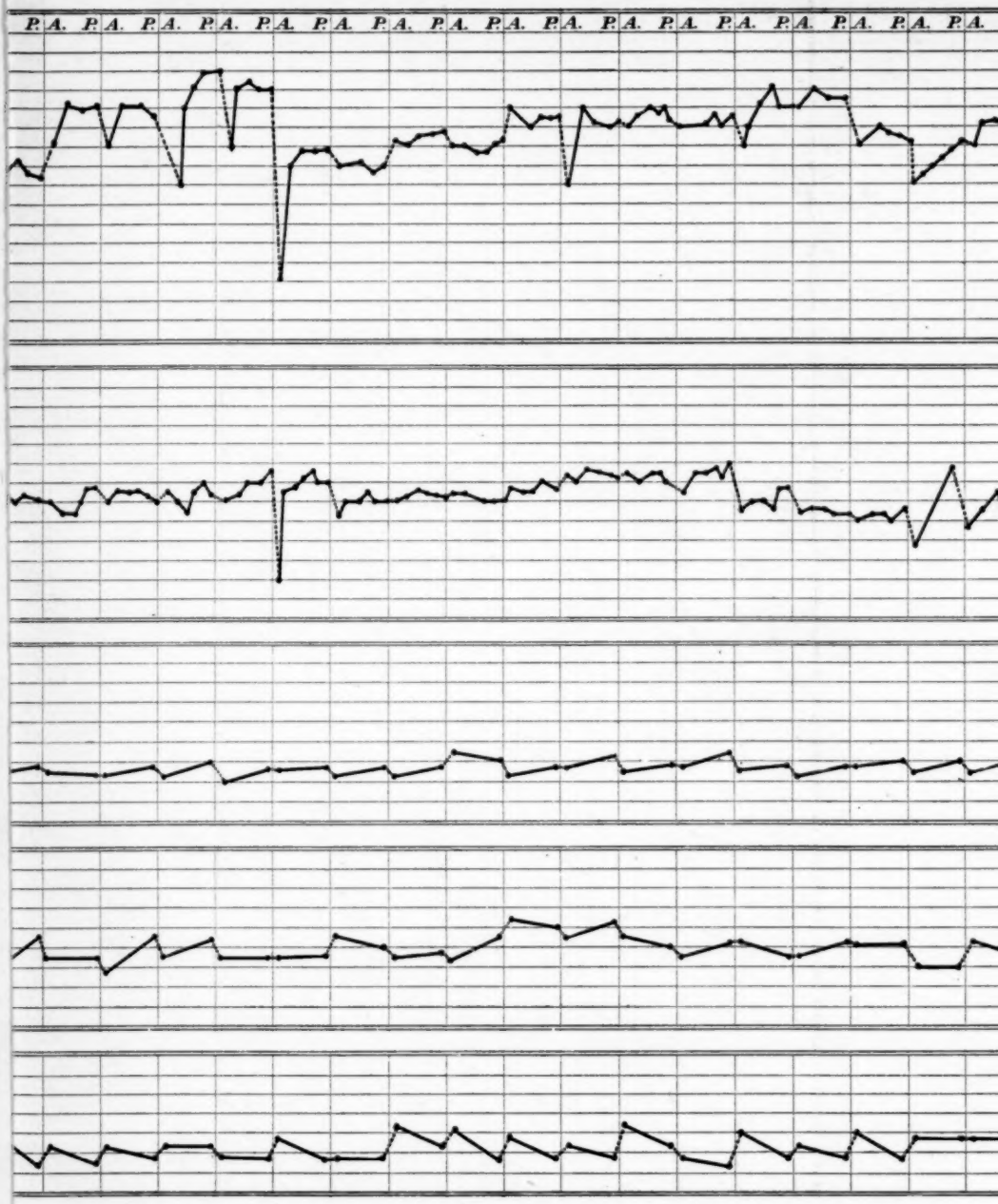
NEW YORK.—Reports to the State board of health show a total of 10,806 deaths during the month of July, 1889. The deaths included

CASE I.—C



Each space represents the
Observations were taken
The rectal temperature, pu

CASE I.—Chart to Accompany Clinical History of George Emery.



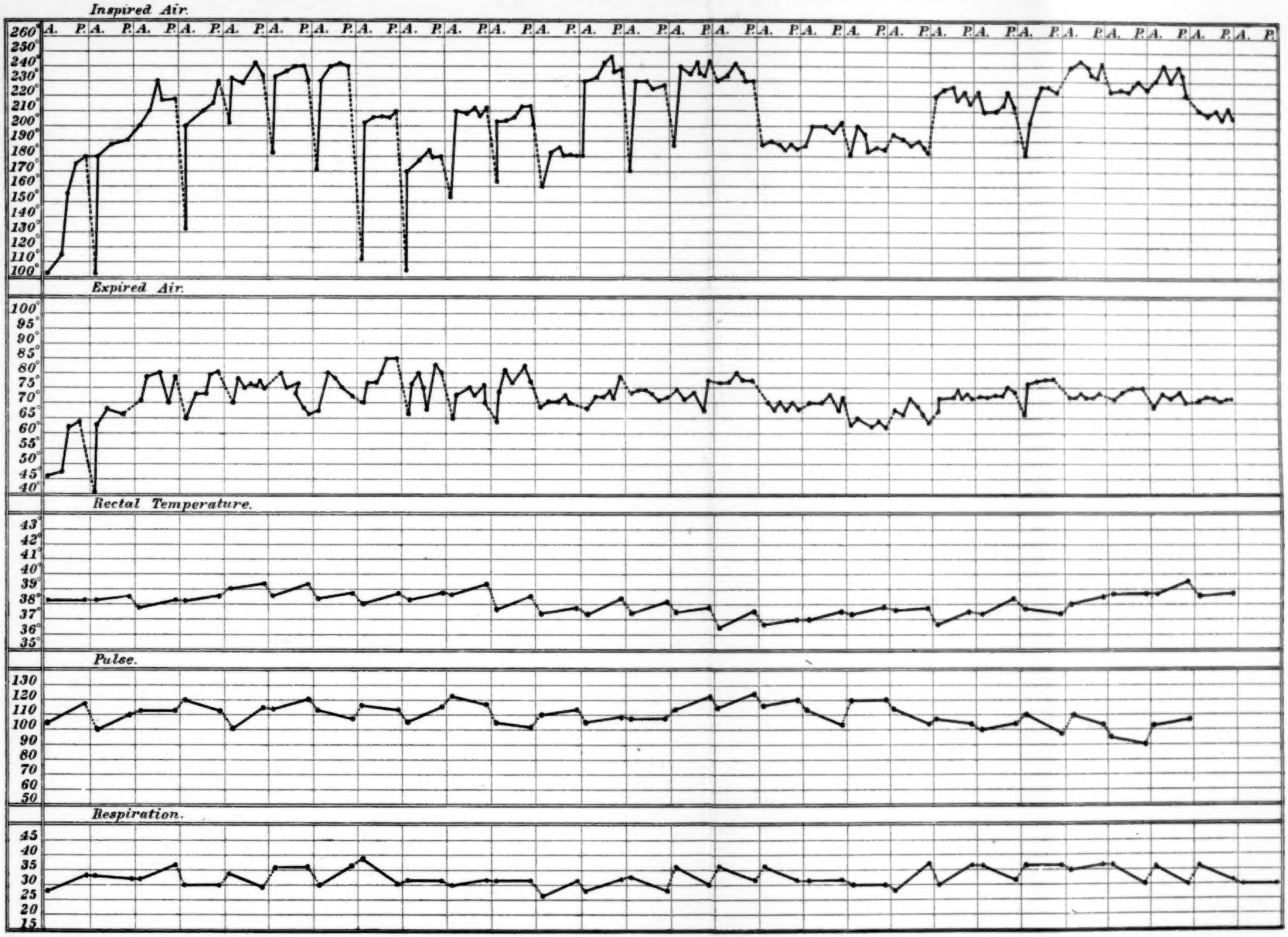
pace represents the daily administration of Weigert's treatment for one hour.
'ations were taken every ten minutes on the temperature of the inspired and expired air.
ctal temperature, pulse, and respiration were taken at the commencement and close of each seanc

ery.

* Severe headache. Treatment discontinued for the day.

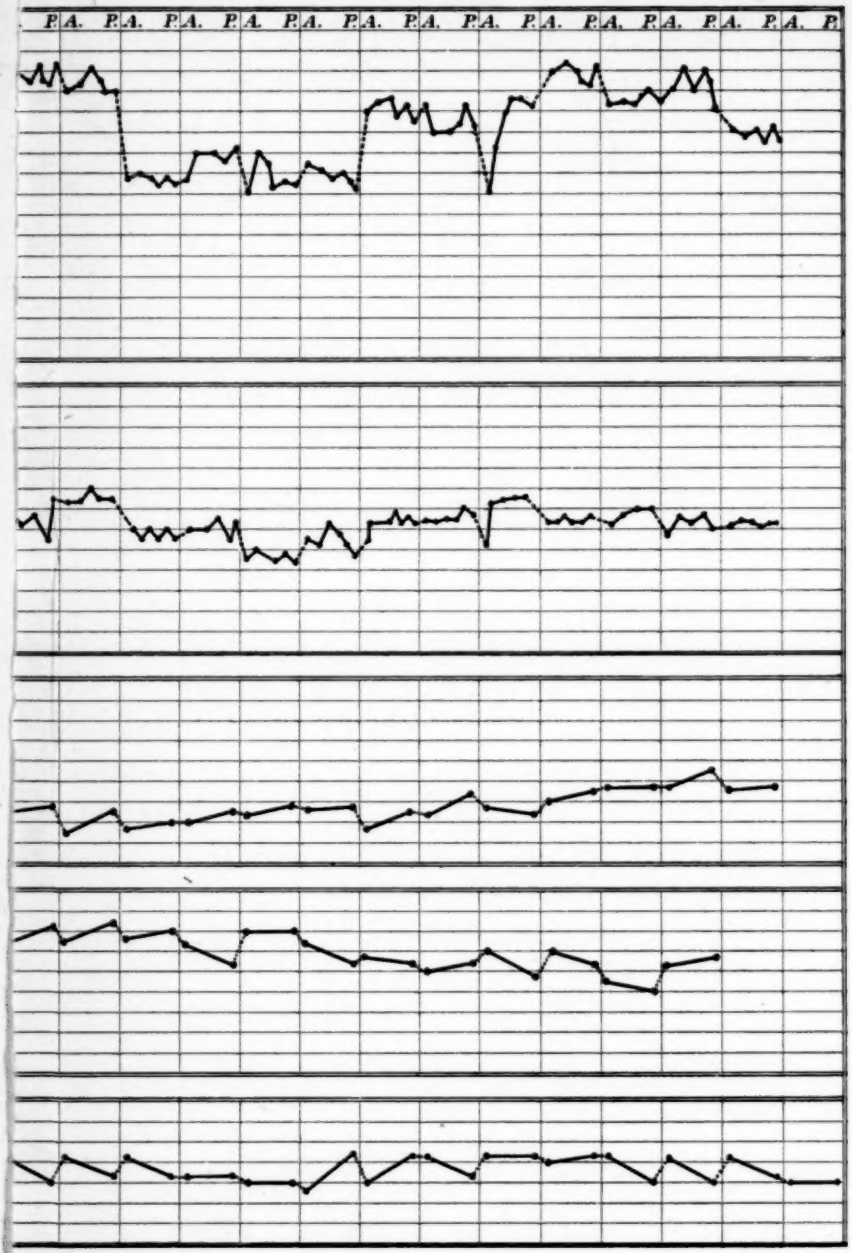
air.
f each seance.

CASE II.—Chart to Accompany Clinical History of Frank Wall. Permit No. 141.



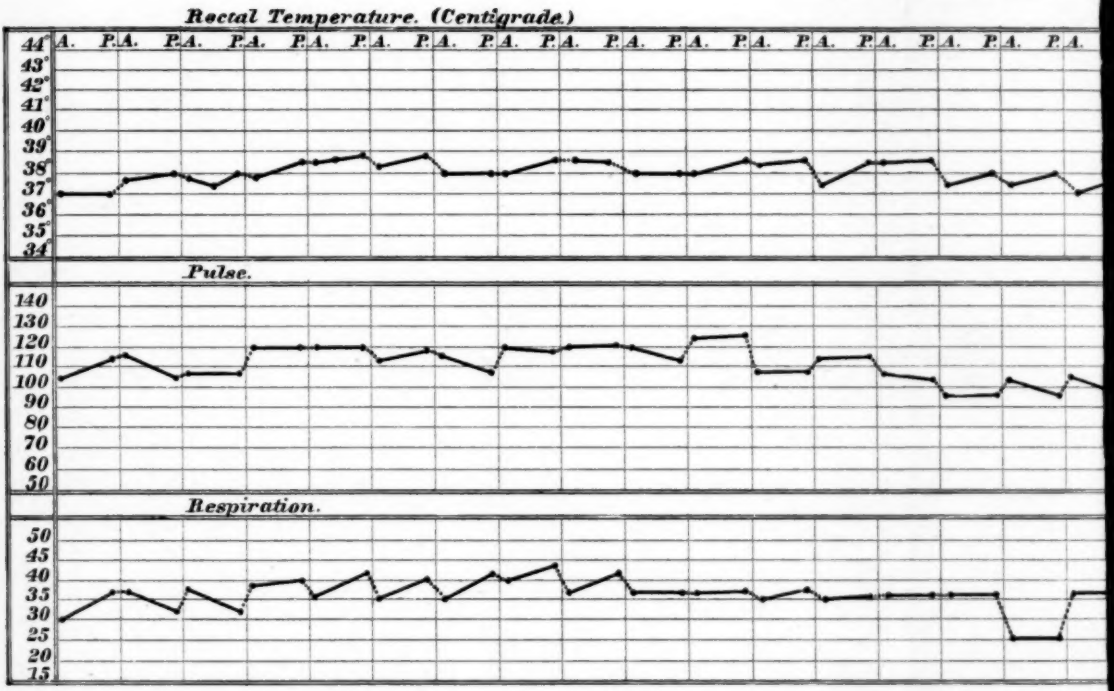
Each space represents the daily administration of Weigert's treatment for one hour. Observations on the temperature of the inspired and expired air taken every ten minutes, and of the body, per rectum, at the commencement and close of each seance.

tory of Frank Wall. Permit No. 141.



f Weigert's treatment for one hour.
and expired air taken every ten minutes,
nent and close of each seance.

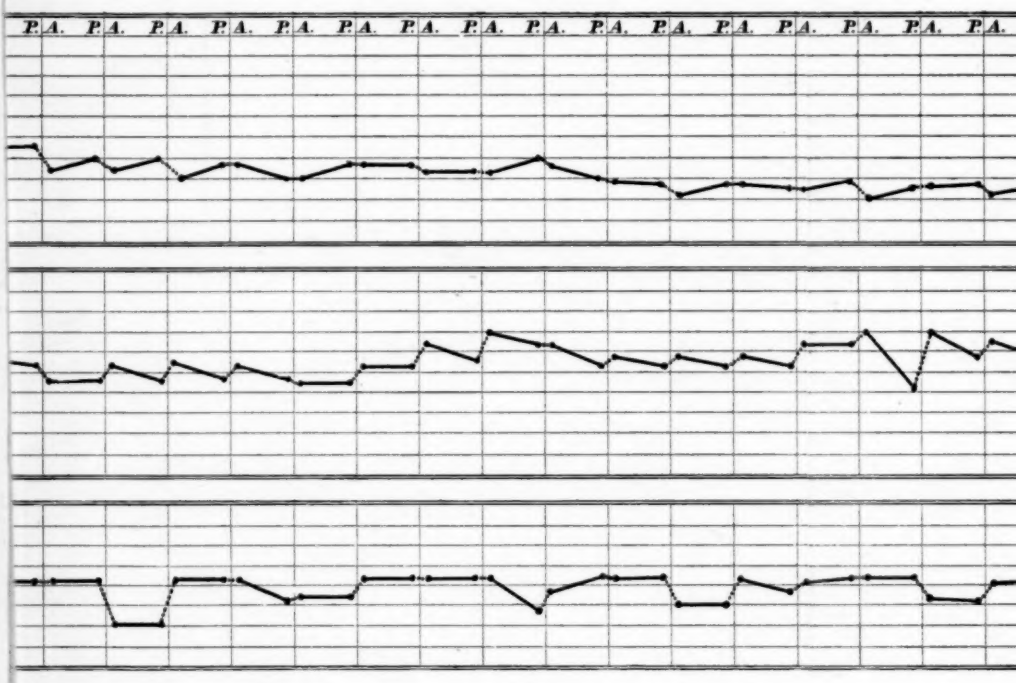
CASE III.—Chart to Accompany
"Control" to George Emery a



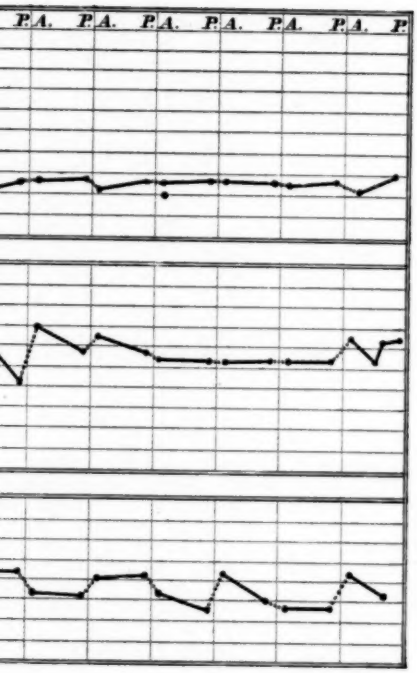
Rectal temperature, Pulse, and Respiration tak

) Accompany Clinical History of Peter Johnson.

) George Emery and Frank Wall. Cases I and II.



nd Respiration taken at the commencement and close of each hour.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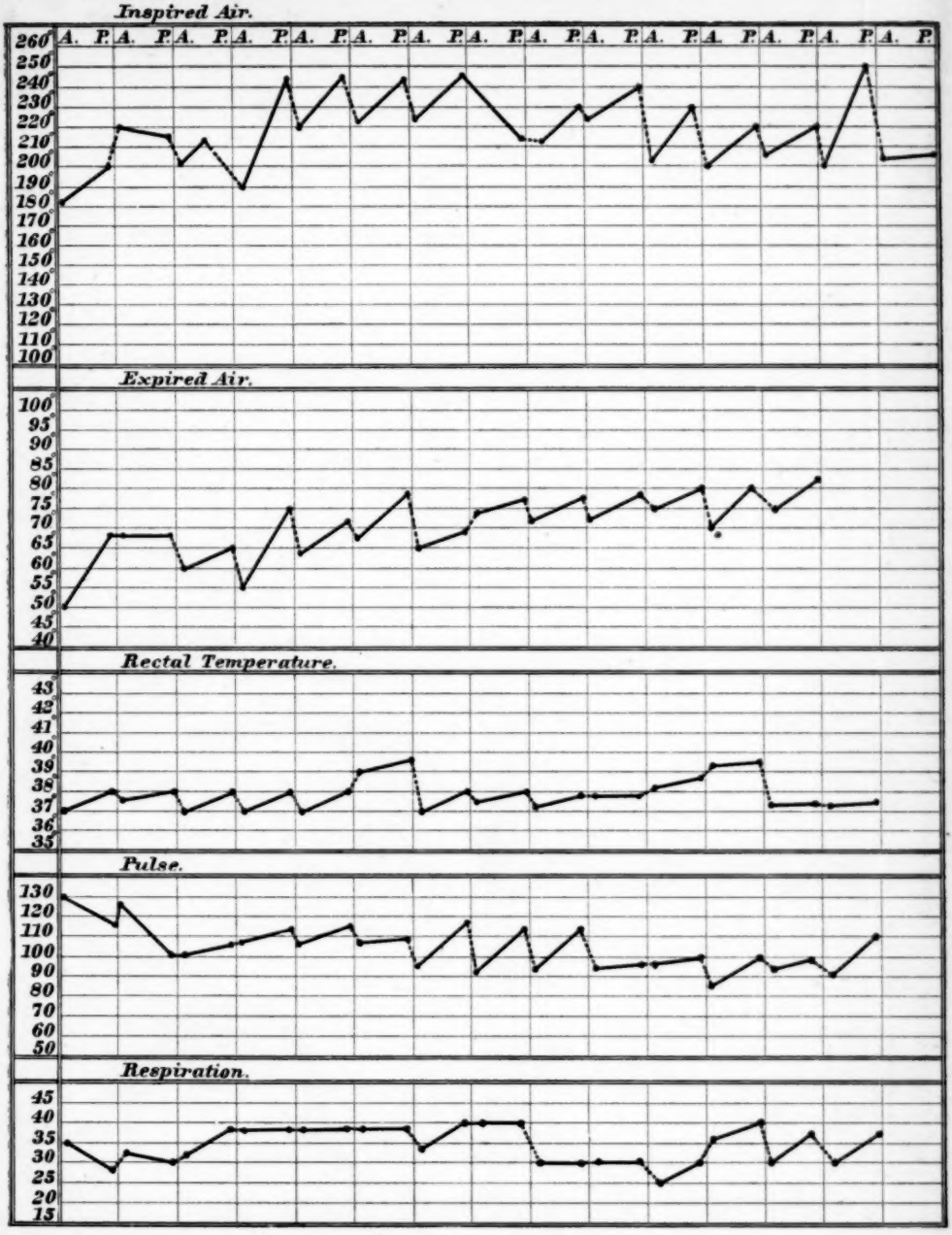
CASE IV.—Chart to Accompany Clinical History of Patrick Tracy.



Each space represents the daily administration of Weigert's treatment for one hour. Observations on the temperature of the inspired and expired air, and of the body, per rectum, taken at the commencement and close of each seance.

enteric fever, 117; small-pox, 1; scarlet fever, 69; measles, 33; erysipelas, 14; whooping-cough, 112; croup and diphtheria, 305; and diarrhœal diseases, 3,092. The Monthly Bulletin says:

July is always the month of greatest mortality in this State. Of 368,000 deaths occurring during the last four years, more than 40,000, or about 11 per cent., occurred in July, and of the 62,700 deaths that have been reported during the seven months of this year, 10,650 occurred in this month. This increase is due to the excess of diarrhœal diseases over that of any other month. During the past four years, 38 per cent. of the mortality from this cause has occurred in July. The infant death rate has corresponded. During four years 37 per cent. of the deaths have occurred under five years of age; 53 per cent. of the July deaths have been infantile. During the present month 51.4 per cent. of the deaths are infantile, and about 28.5 from diarrhœal diseases. There is a rather marked increase of deaths from typhoid fever over the average for July. Scarlet fever, measles, and whooping-cough show considerably less fatality than a year ago. Small-pox has been brought to Albany, contracted from the traveling case from Colorado spoken of in the last Bulletin, and 3 cases have developed. From consumption 93.22 deaths occurred in each 1,000 deaths from all causes, and 190.40 per 1,000 over five years of age. The mortality of several localities, particularly in the maritime district, is much increased by a large transient summer population.

RHODE ISLAND—*Newport.*—The following communication has been received from Henry E. Turner, jr., executive officer of the board of health, under date of August 30, 1889:

The inclosed weekly report contains a large number of cases of typhoid fever reported. This is because no reports had been previously made, and the dates of contraction of the disease date back to August 12. Eight of these 14 cases are reported from Newport Hospital; 5 of which are from U. S. T. S. New Hampshire, and 1 a patient brought to the hospital from the town of Portsmouth, the other 2 are New Yorkers, a groom and a photographer, who undoubtedly contracted the disease before coming here for the season. These 8 cases were admitted to the hospital, respectively, on August 19th, 2; 20th, 1; 22nd, 1; 24th, 1; 26th, 2; 17th, 1; of the remaining 5 cases, one was a young lady of Philadelphia, who had been here but three days when taken sick, on August 12; the 4 others were Newporters, and were taken sick, respectively, on August 12, 14, and 16.

The death reported from typhoid was one of the patients from training ship New Hampshire. Of the 2 cases of diphtheria reported, one was contracted in Connecticut, by a school girl on vacation, who returned home on account of her sickness, the other not yet investigated.

The 2 cases of measles in one house not investigated for cause.

VIRGINIA—*Petersburgh.*—Month of August, 1889. Population, 25,000. Total deaths 50, including enteric fever 4.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Aug. 31	1,579,383	675	.....	.....	.....	.....	.....	.....	17	1	23	1	14
Brooklyn, N. Y.	Aug. 31	834,607	307	.....	.....	.....	.....	.....	.....	4	3	14	1	3
Baltimore, Md	Aug. 31	500,343	168	.....	.....	.....	.....	.....	.....	5	2	1	.....	2
San Francisco, Cal.	Aug. 26	325,000	86	.....	.....	.....	.....	.....	.....	1	.....	1	1	1
Cincinnati, Ohio	Aug. 31	325,000	108	.....	.....	.....	.....	.....	.....	1	.....	10	.....	.....
New Orleans, La.	Aug. 24	254,000	115	.....	.....	.....	.....	.....	.....	1	.....	4	.....	.....
Pittsburgh, Pa.	Aug. 31	230,000	93	.....	.....	.....	.....	.....	.....	11	2	6	1	1
Detroit, Mich.	Aug. 24	230,000	73	.....	.....	.....	.....	.....	.....	1	1	3	.....	1
Louisville, Ky.	Aug. 31	227,000	41	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....
Minneapolis, Minn.	Aug. 24	200,000	51	.....	.....	.....	.....	.....	.....	3	.....	1	.....	.....
Minneapolis, Minn.	Aug. 31	200,000	36	.....	.....	.....	.....	.....	.....	5	.....	1	.....	.....
Rochester, N. Y.	Aug. 24	130,000	48	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Providence, R. I.	Aug. 31	127,000	49	.....	.....	.....	.....	.....	.....	1	.....	2	.....	1
Indianapolis, Ind.	Aug. 31	124,450	40	.....	.....	.....	.....	.....	4	1	.....	2	.....	1
Denver, Colo.	Aug. 30	100,000	37	.....	.....	.....	.....	.....	.....	7	.....	.....	.....	.....
Toledo, Ohio	Aug. 30	89,000	20	.....	.....	.....	.....	.....	.....	1	.....	2	.....	2
Fall River, Mass.	Aug. 31	69,000	29	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Nashville, Tenn.	Aug. 30	65,153	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	Aug. 31	60,145	44	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Portland, Me.	Aug. 31	42,000	17	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Manchester, N. H.	Aug. 24	42,000	12	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Galveston, Tex.	Aug. 9	40,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Aug. 16	40,000	15	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Galveston, Tex.	Aug. 23	40,000	15	.....	.....	.....	.....	.....	.....	1	.....	.....	1	.....
San Diego, Cal.	Aug. 28	32,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	Aug. 24	30,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	Aug. 31	30,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Aug. 31	30,000	14	.....	.....	.....	.....	.....	.....	6	.....	.....	.....	.....
Auburn, N. Y.	Aug. 31	26,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Aug. 29	22,000	8	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Newton, Mass.	Aug. 3	21,553	9	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Newton, Mass.	Aug. 10	21,553	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Newton, Mass.	Aug. 17	21,553	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Aug. 24	21,553	8	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Newton, Mass.	Aug. 31	21,553	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Aug. 25	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Aug. 24	15,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended August 17, corresponded to an annual rate of 19.2 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Derby, viz, 9.0, and the highest in Preston, viz, 42.6 a thousand. Diphtheria caused 3 deaths in Sheffield, 4 in Birmingham, and 2 in Liverpool.

London.—One thousand three hundred and eighty-two deaths were registered during the week, including measles, 18; scarlet fever, 13; diphtheria, 36; whooping-cough, 17; enteric fever, 8; diarrhœa and dysentery, 158, and cholera and choleraic diarrhœa, 4. The deaths from all causes corresponded to an annual rate of 16.6 a thousand. Diseases of the respiratory organs caused 162 deaths. In greater London 1,760 deaths were registered, corresponding to an annual rate of 15.8 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 61; whooping-cough, 10; and fever, 5.

Scotland.—The deaths registered in 8 principal towns during the week ended August 17, corresponded to an annual rate of 17.8 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Aberdeen, viz, 11.6, and the highest in Perth, viz, 26.9 a thousand. The aggregate number of deaths registered from all causes was 455, including small-pox, 1; measles, 10; diphtheria, 7; whooping-cough, 21; fever, 6; and diarrhœa, 43.

During the month of July, 1889, there were 2,270 deaths registered in these towns, including diarrhœa and dysentery, 139; fever, 30; measles, 89; whooping-cough, 96; diphtheria, 20; and scarlet fever, 14.

During the quarter ended June 30, 1889, there were 18,213 deaths registered in Scotland, corresponding to an annual rate of 17.9 a thousand of the estimated population.

In the principal town districts the death rate was 20.6 a thousand. The deaths from all causes in these districts amounted to 2,562 in April, 2,469 in May, and 2,041 in June. The deaths included measles, 363; scarlet fever, 51; whooping-cough, 504; fevers, 41; and diarrhœa and dysentery, 129.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended August 17, in the 16 principal town districts of Ireland, was 23.0 a thousand of the population. The lowest

rate was recorded in Drogheda, viz, 4.2, and the highest in Lurgan, viz, 35.9 a thousand. In Dublin 165 deaths were registered, including diphtheria, 1; measles, 1; enteric fever, 3; diarrhœa, 23; and whooping-cough, 4.

VENEZUELA—*Caracas.*—The United States minister, in his dispatch, dated August 9, 1889, says:

Several cases of what has been erroneously reported to be "yellow fever" have been developed here during the past ten days. Some of the premonitory symptoms of the disease are somewhat analagous to those of yellow fever, but it is certainly not a species of that much dreaded plague. If taken in time it yields readily to medical treatment, nor has it, as yet, assumed an epidemic form. It is confined for the most part to districts where the drainage is very defective, and to recently arrived and unacclimated foreigners. Some few deaths have occurred from it, but were among our resident or transient countrymen, though nearly all of them have had it. With proper care and precautions foreigners need have no serious apprehensions in visiting Caracas, even in this, the most sickly season of the year.

Later.—August 19, 1889. Since the date of my dispatch of the 9th instant, the fever here seems to have assumed a partially epidemic form, and new cases (especially among foreigners) have been reported almost daily. Two members of my own family have had it, but are now convalescing. As yet there have been no deaths among our resident or transient countrymen.

The disease is known here, in common parlance, as "yellow fever," but whilst it is not that, it is very little less to be dreaded, and I would not advise foreigners to come hither before the middle or last of October next, at which time the hot season usually changes for the better.

CUBA.—*Havana.*—Week ended August 24, 1889. Nineteen deaths from yellow fever.

Cardenas.—August 23, 1889. Good health in town and harbor.

Cienfuegos.—August 26, 1889. No more than three cases of yellow fever have occurred during the week. None in town or shipping.

NETHERLANDS.—The deaths registered in the principal cities of the Netherlands, having an estimated population of 1,129,678, during the month of June, 1889, corresponded to an annual rate of 25.2. The lowest rate was in Hertogenbosch, viz, 19.6, and the highest in Haarlem, viz, 39.7. The deaths included enteric and typhus fever, 6; measles, 130; whooping-cough, 34; diphtheria, 16; and diarrhœa and dysentery, 63.

BRAZIL.—*Ceara.*—Month of July, 1889. Population, 29,000; total deaths, 177; none from contagious diseases.

WEST INDIES.—*Barbadoes.*—July 29, 1889. Health of island good.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Aug. 17	2,260,945	928	.....	.....	2	.....	27	13	18	13	10
Glasgow	Aug. 17	545,678	210	.....	.....	.....	.....	1	.....	2	.....	.....
Warsaw	Aug. 10	445,770	263	.....	.....	8	.....	.....	6	5	.....	.....
Calcutta	July 20	433,219	219	17	.....	1	.....	.....	.....	1	1	.....
Amsterdam	Aug. 17	399,051	142	.....	.....	.....	.....	1	.....	6	.....	.....
Copenhagen	Aug. 16	307,000	126	.....	.....	.....	.....	1	.....	5	.....	.....
Rio de Janeiro	July 7	300,000	347	.....	3	2	1	3	.....	1	.....	.....
Rio de Janeiro	July 14	300,000	316	.....	6	5	4	4	.....	.....	.....	.....
Rio de Janeiro	July 21	300,000	266	.....	3	4	5	1	.....	.....	.....	.....
Rio de Janeiro	July 28	300,000	204	.....	2	5	2	2	1	.....	.....	.....
Rio de Janeiro	Aug. 4	300,000	258	.....	7	7	2	1	.....	2	.....	.....
Edinburgh	Aug. 10	266,900	77	.....	.....	.....	.....	.....	.....	3	.....	.....
Palermo	Aug. 17	250,000	97	.....	.....	.....	.....	.....	.....	2	.....	.....
Rotterdam	Aug. 17	197,724	81	.....	.....	.....	.....	.....	.....	.....	4	.....
Genoa	Aug. 17	180,191	81	.....	.....	1	1	.....	.....	1	.....	.....
Trieste	Aug. 10	154,500	71	.....	.....	.....	.....	.....	.....	2	.....	.....
Stuttgart	Aug. 17	125,510	41	.....	.....	.....	.....	.....	.....	1	.....	.....
Pernambuco	July 30	120,000	106	.....	.....	.....	1	2	2	.....	.....	.....
Pernambuco	Aug. 6	120,000	66	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barmen	Aug. 17	109,000	56	.....	.....	.....	.....	.....	.....	1	1	.....
Catania	Aug. 18	108,000	46	.....	.....	.....	.....	.....	1	1	.....	.....
Leghorn	Aug. 18	103,142	39	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edinburgh	Aug. 10	76,400	22	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Aug. 10	65,802	23	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Aug. 17	65,028	33	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cienfuegos	Aug. 19	40,655	15	.....	1	.....	.....	.....	.....	.....	.....	.....
Cienfuegos	Aug. 26	40,655	14	.....	3	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Aug. 14	35,000	62	.....	.....	1	.....	1	.....	.....	.....	.....
Vera Cruz	Aug. 22	23,800	22	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Aug. 11	23,631	12	.....	.....	1	.....	.....	.....	2	.....	.....
Cartagena, Colombia	Aug. 10	20,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Colombia	Aug. 17	20,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antigua	Aug. 4	15,847	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antigua	Aug. 11	15,847	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antigua	Aug. 18	15,847	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Aug. 9	13,500	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Aug. 16	13,500	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	July 22	1,250	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	July 29	1,250	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Aug. 5	1,250	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Aug. 12	1,250	1	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 37. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., September 13, 1889.

***Abstract of Domestic and Foreign Sanitary Reports received during the week ended September* 13, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.**

UNITED STATES.

Reports from National Quarantine Stations.

CAPE CHARLES, VA.—Owing to severe northeaster but few sailing-vessels were spoken. Fifteen vessels were spoken during the week ended September 7.

DELAWARE BREAKWATER, DEL.—Owing to stormy weather but 1 vessel entered at quarantine.

GULF QUARANTINE (NORTH CHANDELEUR ISLAND), LA.—Two vessels were discharged after disinfection, and 1 remains in quarantine.

PORT TOWNSEND, WASH.—Nine vessels inspected.

SAN DIEGO, CAL.—Week ended September 4, 1889. The American steamer Farrallon, from Manzanillo, Mexico, with a cargo of tropical fruits and hard wood, with two of the crew sick with intermittent fever. The captain reports extremely hot weather on the lower coast, and heavy rains. The average mean temperature of San Diego during August was higher than for the corresponding month in any year since 1871, with but one exception.

There were 5 vessels inspected during the week.

Reports of States, and Yearly and Monthly Reports of Cities.

CALIFORNIA—*Sacramento.*—Month of August, 1889. Population, 35,000. Total deaths, 23, including diphtheria, 2.

Los Angeles.—Month of August, 1889. Population, 80,000. Total deaths, 60, including enteric fever, 4; diphtheria, 6; and whooping-cough, 2.

COLORADO—*Denver.*—Month of August, 1889. Population, 100,000. Total deaths, 158, including diphtheria, 5; enteric fever, 23; whooping-cough, 2; and scarlet fever, 1.

IOWA.—Month of August, 1889. Reports to the State board of health, Des Moines, show that diphtheria was present in 8 places, and scarlet fever in 4 places. These diseases appear to be subsiding.

The Monthly Bulletin says:

On the 26th of July a case of small-pox was reported near Mount Ayr, in Ringgold County, with a large number of exposures. Immediate vaccination of all exposed persons was had, and prompt and vigorous measures adopted to prevent the spread of the disease. Unfortunately, the vaccine virus proved worthless, hence the outlook at this writing is not encouraging.

Dubuque.—Month of August, 1889. Population 35,000. Total deaths, 14. None from contagious diseases.

Davenport—Month of August, 1889. Population, 33,715. Total deaths, 25, including diphtheria, 5; and whooping-cough, 1.

MASSACHUSETTS—*Fall River.*—Month of August, 1889. Population, 69,000. Total deaths, 178, including enteric fever, 7; scarlet fever, 2; and diphtheria, 1.

MICHIGAN—Month of August, 1889. Reports to the State board of health, Lansing, from 209 observers, indicate that, as compared with the preceding month, cholera morbus, dysentery, cholera infantum, diarrhœa, and typho-malarial fever increased, and rheumatism, neuralgia, and inflammation of kidneys decreased, in prevalence. Including reports from regular observers and others, diphtheria was reported present, during the month, at 21 places, scarlet fever at 18 places, enteric fever at 40 places, and measles at 7 places.

Week ended August 31, 1889. Reports from 48 observers indicate that influenza, bronchitis, remittent fever, cholera infantum, inflammation of the brain, and tonsilitis increased, and inflammation of the bowels, neuralgia, intermittent fever, and whooping-cough decreased, in area of prevalence. Diphtheria was reported present during the week, and since, at 13 places, scarlet fever at 5 places, enteric fever at 20 places, and measles at 1 place, Grand Rapids.

Detroit.—Month of August, 1889. Population, 230,000. Total deaths, 345, including diphtheria, 13; enteric fever, 5; measles, 1; whooping-cough, 7; and scarlet fever, 2.

Grand Rapids.—Month of August, 1889. Population, 70,000. Total deaths, 112, including diphtheria, 1; enteric fever, 5; and measles, 3.

PENNSYLVANIA—*Williamsport.*—Month of August, 1889. Population, 35,271. Total deaths, 27. None from contagious diseases.

NEW YORK—*Rochester.*—Month of August, 1889. Population 130,000. Total deaths 263, including enteric fever, 4; and whooping-cough 4.

OHIO—*Cincinnati.*—Month of August, 1889. Population 325,000. Total deaths 490, including diphtheria, 29; measles, 10; scarlet fever, 2; enteric fever, 14; and whooping-cough, 3.

TENNESSEE—*Chattanooga.*—Month of August, 1889. Population 40,000. Total deaths 38, including enteric fever, 5.

Reports to the State board of health, Nashville, indicate that for the month of July the principal diseases, named in the order of their greater prevalence, were malarial fever, dysentery, diarrhœa, cholera morbus, cholera infantum, and consumption. Enteric fever was reported in 17 counties; whooping-cough in 9 counties; scarlet fever in 5 counties; and measles in 2 counties.

VIRGINIA—*Lynchburg.*—Month of August, 1889. Population ———. Total deaths 24, including enteric fever, 2.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Sept. 7	1,530,281	709	.....	.....	.....	.....	.....	.....	15	3	16	2	15
Chicago, Ill.	Aug. 31	1,100,000	389	.....	.....	.....	.....	.....	.....	16	3	21	1	3
Philadelphia, Pa.	Aug. 31	1,040,245	410	.....	.....	.....	.....	.....	.....	21	3	6	.....	5
Philadelphia, Pa.	Sept. 7	1,040,245	343	.....	.....	.....	.....	.....	.....	16	6	5	.....	1
Brooklyn, N. Y.	Sept. 7	834,607	335	.....	.....	.....	.....	.....	.....	9	5	16	1	3
Baltimore, Md	Sept. 7	500,343	157	.....	.....	.....	.....	.....	.....	7	1	.....	.....	.....
St. Louis, Mo.	Aug. 31	450,000	162	.....	.....	.....	.....	.....	.....	4	1	3	0	2
St. Louis, Mo.	Sept. 7	450,000	138	.....	.....	.....	.....	.....	.....	4	0	4	.....	1
San Francisco, Cal.	Aug. 30	325,000	.....	.....	.....	.....	.....	.....	.....	3	.....	1	.....	1
Cincinnati, Ohio	Sept. 7	325,000	108	.....	.....	.....	.....	.....	.....	5	2	.....	1	.....
New Orleans, La.	Aug. 31	254,000	104	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Pittsburgh, Pa.	Sept. 7	230,000	101	.....	.....	.....	.....	.....	.....	9	1	5	2	.....
Minneapolis, Minn.	Sept, 7	200,000	37	.....	.....	.....	.....	.....	.....	2	1	.....	.....	.....
Kansas City, Mo.	Aug. 31	180,000	51	.....	.....	.....	.....	.....	.....	6	1	.....	.....	1
Rochester, N. Y.	Aug. 31	130,000	57	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Rochester, N. Y.	Sept. 7	139,000	51	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Providence, R. I.	Sept. 7	127,000	54	.....	.....	.....	.....	.....	.....	2	.....	2	.....	1
Indianapolis, Ind.	Sept. 7	124,450	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....
Richmond, Va.	Aug. 31	100,000	39	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Denver, Colo.	Aug. 30	100,000	37	.....	.....	.....	.....	.....	.....	7	.....	.....	.....	.....
Denver, Colo.	Sept. 6	100,000	40	.....	.....	.....	.....	.....	.....	2	.....	2	.....	1
Toledo, Ohio	Sept. 6	89,000	21	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....
Fall River, Mass.	Sept. 7	69,000	41	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Nashville, Tenn.	Sept. 7	65,153	36	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Charleston, S. C.	Sept. 7	60,145	34	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	Sept. 7	50,000	14	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Manchester, N. H.	Aug. 31	42,000	14	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Portland, Me.	Sept. 7	42,000	20	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Galveston, Tex.	Aug. 30	40,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	Aug. 19	35,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	Aug. 26	35,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	Sept. 2	35,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	Sept. 7	35,000	5	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
San Diego, Cal.	Sept. 4	32,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Sept. 7	30,000	6	.....	.....	.....	.....	.....	.....	8	.....	.....	.....	.....
Auburn, N. Y.	Sept. 7	26,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Aug. 31	25,000	14	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Haverhill, Mass.	Sept. 7	25,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Sept. 1	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Sept. 8	16,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa	Aug. 31	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	Sept. 7	16,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Aug. 31	15,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

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London.—One thousand two hundred and forty-two deaths were registered during the week, including measles, 9; scarlet fever, 16; diphtheria, 37; whooping-cough, 20; enteric fever, 11; diarrhœa and dysentery, 109, and cholera and choleraic diarrhœa, 2. The deaths from all causes corresponded to an annual rate of 14.9 a thousand. Diseases of the respiratory organs caused 115 deaths. In greater London 1,604 deaths were registered, corresponding to an annual rate of 14.8 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 38; whooping-cough, 10; and scarlet fever, 5.

Scotland.—The deaths registered in 8 principal towns during the week ended August 24 corresponded to an annual rate of 18.1 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Aberdeen, viz, 13.3, and the highest in Paisley, viz, 29.9 a thousand. The aggregate number of deaths registered from all causes was 462, including small-pox, 2; measles, 13; scarlet fever, 2; diphtheria, 8; whooping-cough, 11; fever, 7; and diarrhœa, 48.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended August 24, in the 16 principal town districts of Ireland, was 22.5 a thousand of the population. The lowest rate was recorded in Kilkenny, viz, 0.0, and the highest in Sligo, viz, 48.1 a thousand. In Dublin 170 deaths were registered, including diphtheria, 1; measles, 1; enteric fever, 4; diarrhœa, 24; whooping-cough, 2; dysentery, 1; and scarlet fever, 1.

CUBA—*Havana.*—Month of August, 1889. Five hundred and fifty-seven deaths were registered, including yellow fever, 84; enteric fever, 14; so-called pernicious fever, 50; bilious fever, 1; paludal fever, 3, and diphtheria and croup, 2.

During the month of August, 1888, there were 116 deaths from yellow fever, a little over one-half occurring in the first part of the month, while this year over half have occurred during the last half of the month.

Little or no small-pox is known to exist in the province of Havana, although there are cases in the interior towns.

There is every evidence that the usual, and even an increased, number of smuggling fishing-smacks have been and are carrying on their illegitimate business between this port and the coast of Florida, this season.

The weather is intensely hot, and the summer so far has been a warmer one than usual.

During the week ended August 30 there were 24 deaths from yellow fever.

Cardenas.—August 30, 1889. Good health in town and harbor. Seasonable weather, with much rain.

TASMANIA—*Hobart.*—Month of June, 1889. Population, 34,705. Total deaths, 37. None from contagious diseases.

UNITED STATES OF COLOMBIA—*Barranquilla.*—The United States consul at Colon, under date of August 24, forwards the following letter to the Department of State, explanatory of his cable dispatch relative to the steamer Adirondack, published in Abstract No. 35, current series, page 265:

UNITED STATES CONSULATE,
Barranquilla, August 20, 1889.

SIR: A young lady, Miss Addie C. Ramsay, came from New York via Port-au-Prince on the Adirondack. The second day after her arrival she was taken ill; on the fourth day it developed as yellow fever of the most malignant type. She died last night, and was buried at 4 o'clock this morning. The Adirondack had sailed before this was announced. As usual, the telegraph line to Cartagena was not in order; so I have no recourse except to ask you to transmit a notice by telegram to the Department to anticipate the arrival of the ship at New York. If the ship had germs of the disease on board previous to her arrival here, her cargo of hides and bananas, and her devious route by Colon and Port Limon, makes me extremely anxious in regard to the passengers that went from here. * * * I write a dispatch to the Department, but as the Pacific Mail and the Atlas steamer are both due on the same day, it may be too late to prevent mischief. I leave the matter to your decision.

I am, sir, your obedient servant,

P. M. WHELPLEY,
Vice-Consul.

Gen. VICTOR VIFQUAIN,
United States Consul, Colon.

[From the *Deutsche Correspondent*, Baltimore, September 7, 1889.—Translation.]

ASIATIC TURKEY.—Cholera, since July 27, made its entry into Mesopotamia in as mysterious a manner as it made its appearance into Egypt in 1883. It is certain that it penetrated from Bombay via Bassora; it could not, as yet, be determined how. Perhaps, as in Egypt

through Arabian stokers (firemen), who are employed on the English steamers of the Bassora-Bombay Line, and who, upon their arrival at Bassora, go to their homes. At first cholera appeared at Schatra (3,000 inhabitants), two and a half days' journey from Bassora, at the Schatel-Hay Canal, which connects the Tigris with the Euphrates River. In a few days, from July 27 to August 6, 308 persons died. On the 1st of August it appeared at Naszrie (8,000 inhabitants), southerly from Schatra near the embouchure of the Schatel-Hay into the Euphrates—a city which was founded in 1872 by Natir Pasha, the Montefik sheik. From the 1st to the 9th of August 293 deaths occurred—on the 8th of August so many as 85. The houses are situated upon the flat marsh land, and are only reed huts. The inhabitants carry on the culture of rice and some cattle raising. It finally made its appearance at Bassora on August 6, and at first an Arabian girl died who had come there ten days before from Filie in Persia. On August 9, 15 deaths occurred there. The reports of Gazala, the sanitary physician, do not allow any doubt to arise as to the diagnosis.

SPAIN—*Madrid.*—September 7, 1889. Yellow fever is raging at Vigo, in the province of Pontevedra.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Aug. 17	5,642,015	1,760	.....	.....	.....	.....	8	14	39	20	.....
Paris	Aug. 24	2,260,945	927	.....	.....	2	.....	33	4	35	9	7
Glasgow	Aug. 24	545,678	212	.....	.....	.....	.....	2	1	3	.....	5
Warsaw	Aug. 17	445,770	255	.....	.....	18	.....	.....	4	5	.....	.....
Calcutta	July 27	433,219	222	19	.....	.....	.....	.....	.....	1	1	.....
Amsterdam	Aug. 24	399,051	153	.....	.....	.....	.....	1	1	1	.....	.....
Copenhagen	Aug. 17	307,000	145	.....	.....	.....	.....	3	1	7	.....	.....
Belfast	Aug. 17	299,622	116	.....	.....	.....	.....	6	.....	.....	.....	.....
Munich	Aug. 10	281,000	230	.....	.....	.....	.....	.....	.....	5	.....	.....
Munich	Aug. 17	281,000	185	.....	.....	.....	.....	.....	.....	3	.....	.....
Palermo	Aug. 24	250,000	92	.....	.....	1	.....	.....	1	.....	.....	.....
Genoa	Aug. 24	180,201	81	.....	.....	.....	1	.....	.....	1	.....	.....
Stuttgart	Aug. 24	125,510	44	.....	.....	.....	.....	.....	1	3	.....	.....
Havre	Aug. 24	112,074	59	.....	.....	.....	.....	.....	.....	.....	.....	.....
Catania	Aug. 25	108,000	24	.....	.....	.....	.....	1	1	1	1	.....
Leghorn	Aug. 25	103,142	31	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rheims	Aug. 17	97,903	56	.....	.....	.....	.....	2	.....	2	.....	.....
Rheims	Aug. 24	97,903	46	.....	.....	.....	.....	1	.....	.....	1	.....
Cadiz	Aug. 24	65,028	34	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Aug. 29	23,800	19	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Aug. 18	23,631	13	.....	.....	1	.....	.....	.....	2	.....	.....
Kingston, Can	Aug. 30	17,300	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	Aug. 17	7,428	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	Aug. 24	7,428	7	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 38. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., September 20, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended September 20, 1889, ***published in accordance with section*** 4, ***Act of Congress, approved April*** 29, 1878.

UNITED STATES.

NEW YORK QUARANTINE—*Yellow fever.*—The following letter has been received:

QUARANTINE, STATEN ISLAND, *September* 16, 1889.

SIR: The British steamship Cairngorm arrived at this quarantine September 15, at 3 a. m., with John Wood, one of the firemen, deceased about 6 a. m. of the same day, from Curacao the 6th instant, Puerto Cabella the 4th, and Laguayra the 3d.

The history of the case, and the appearance of the remains, afforded symptoms indicative of yellow fever. An autopsy was made on the steamer which confirmed the suspicions. The history was unsatisfactory, there being no physician on board. The autopsy revealed the mottled or boxwood liver, highly congested mucous lining of the stomach, with unmistakable evidence of broken-down condition of the blood corpuscles, indicating hemorrhagic tendencies. Neither the spleen or liver gave any indications of the malarial fevers of the tropics. The kidneys were congested, the skin yellow, and mottled with capillary effusion.

This case is reported to you principally for the reason that the bill of health from this port (Curacao, the place at which the infection was undoubtedly received) was clean.

The victim had a "day and a night off" at this port, and indulged in excesses in common with other members of the crew.

I desire further to inform you that the British steamship Hondo arrived at this port to-day from Greytown, Central America, the 1st instant, with one case of sickness of a highly suspicious character; Joseph Fennell, a passenger, who came on board at Greytown. On arrival at this quarantine he was found to be extremely prostrated, partially delirious, skin icterous, urine scanty, 50 per cent. albumen, pulse 104, temperature 101, condition indicating the approach of collapse. The man was removed to the quarantine hospital and the steamer thoroughly disinfected.

In this case, as in the preceding, the bill of health was clean, and there has been no report of yellow fever at Greytown during the present season.

It is not an uncommon experience at this quarantine to receive clean bills of health from ports which have given us undoubted cases of yellow fever.

Respectfully yours,

WM. M. SMITH,
Health Officer.

JOHN B. HAMILTON, M. D.
Surgeon-General, U. S. Marine Hospital Service.

Reports of States and Yearly and Monthly Reports of Cities.

ALABAMA—*Mobile.*—Month of August, 1889. Population, 40,000. Total deaths, 74, including diphtheria, 1; whooping-cough, 1; and enteric fever, 3.

CALIFORNIA.—The report of the State board of health for the month of August has the following:

Mortality reports received from 100 localities throughout the State, with an estimated population of 830,415, give the number of deaths as 809, which is a percentage of 0.97 per 1,000 in the month, or an annual mortality of 11.64, which we believe to be the lowest death rate ever recorded in this State. It indicates a degree of healthfulness throughout California which is most gratifying to the sanitarian, and gives evidence that the health organizations lately instituted under the new law are doing efficient work.

The deaths included whooping-cough, 10; diphtheria and croup, 26; scarlet fever, 2; measles, 1; and enteric fever, 22.

Oakland.—Month of August, 1889. Population, 60,000. Total deaths, 52, including diphtheria, 3, and enteric fever, 1.

Sacramento.—Month of August, 1889. Population, 35,000. Total deaths, 23, including diphtheria, 2.

San Francisco.—Month of August, 1889. Population, 330,000. Total deaths, 408, including diphtheria, 4; enteric fever, 9; measles, 1; whooping-cough, 6; and scarlet fever, 1.

CONNECTICUT.—Month of August, 1889. Reports to the State board of health, New Haven, from 167 cities and towns, having an aggregate population of 758,422, gives the total number of deaths at 1,190, which is 139 less than in July, and 243 less than in August, 1888. The deaths included scarlet fever, 5; diphtheria and croup, 46; whooping-cough, 15; and enteric fever, 45.

FLORIDA—*Jacksonville.*—Month of August, 1889. Population, 30,000. Total number of deaths, 53, including enteric fever, 3, and whooping-cough, 2.

GEORGIA—*Savannah.*—Month of August, 1889. Population, 57,000. Total deaths, 71, including none from contagious diseases.

IOWA—*Keokuk.*—Month of August, 1889. Population, 16,000. Total deaths, 13, including scarlet fever, 1.

MICHIGAN.—Week ended September 7, 1889. Reports to the State board of health, Lansing, from 50 observers, indicate that neuralgia, whooping-cough, typho-malarial fever, and enteric fever increased, and erysipelas, diarrhœa, cholera morbus, cholera infantum, and pleuritis decreased in area of prevalence. Including reports by regular observers and others, diphtheria was reported present during the week, and since, at 19 places; scarlet fever at 10 places; enteric fever at 22 places, and measles at 2 places.

MINNESOTA—*Minneapolis.*—Month of August, 1889. Population, 200,000. Total deaths, 180, including enteric fever, 14; diphtheria, 9, and measles, 1.

MISSOURI—*St. Louis.*—Month of August, 1889. Population, 450,000. Total deaths, 294, including measles, 1; scarlet fever, 10; diphtheria, 15; whooping-cough, 4, and enteric fever, 18.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Sept. 14	1,581,179	624	.....	.....	.....	.....	.....	.....	15	2	19	1	8
Chicago, Ill.	Sept. 14	1,100,000	360	.....	.....	.....	.....	.....	.....	9	2	17	.....	4
Philadelphia, Pa.	Sept. 14	1,040,245	352	.....	.....	.....	.....	.....	.....	19	4	1	.....	5
Brooklyn, N. Y.	Sept. 14	834,607	323	.....	.....	.....	.....	.....	.....	5	1	13	.....	2
Baltimore, Md.	Sept. 14	500,343	164	.....	.....	.....	.....	.....	.....	6	1	5	.....	2
St. Louis, Mo.	Sept. 14	450,000	165	.....	.....	.....	.....	.....	.....	5	2	5	.....	.....
Cincinnati, Ohio.	Sept. 14	325,000	108	.....	.....	.....	.....	.....	.....	3	.....	4	2	.....
New Orleans, La.	Sept. 7	254,000	113	.....	.....	.....	.....	.....	.....	1	.....	4	.....	1
Washington, D. C.	Sept. 14	250,000	101	.....	.....	.....	.....	.....	.....	6	.....	9	.....	.....
Detroit, Mich.	Aug. 31	250,000	79	.....	.....	.....	.....	.....	.....	2	2	.....	.....	1
Detroit, Mich.	Sept. 7	250,000	67	.....	.....	.....	.....	.....	.....	3	.....	2	.....	2
Cleveland, Ohio.	July 27	235,000	108	.....	.....	.....	.....	.....	.....	2	.....	7	2	.....
Cleveland, Ohio.	Aug. 3	235,000	114	.....	.....	.....	.....	.....	.....	3	1	5	1	.....
Pittsburgh, Pa.	Sept. 14	230,000	65	.....	.....	.....	.....	.....	.....	6	1	4	1	.....
Louisville, Ky.	Sept. 7	227,000	65	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Minneapolis, Minn.	Sept. 14	200,000	28	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Providence, R. I.	Sept. 14	127,000	50	.....	.....	.....	.....	.....	.....	1	.....	4	1	.....
Indianapolis, Ind.	Sept. 13	124,450	24	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Denver, Colo.	Sept. 13	100,000	41	.....	.....	.....	.....	.....	.....	11	.....	1	1	.....
Richmond, Va.	Sept. 14	100,000	35	.....	.....	.....	.....	.....	.....	3	.....	2	.....	.....
Toledo, Ohio.	Sept. 13	89,000	19	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1
Fall River, Mass.	Sept. 14	69,000	35	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1
Nashville, Tenn.	Sept. 14	65,153	17	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Charleston, S. C.	Sept. 14	60,145	38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynn, Mass.	Sept. 14	50,000	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Sept. 14	42,000	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Sept. 7	42,000	21	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Galveston, Tex.	Sept. 6	40,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Sept. 14	30,000	10	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Altoona, Pa.	Sept. 7	30,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Sept. 14	26,000	11	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Haverhill, Mass.	Sept. 14	25,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Sept. 7	21,553	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Sept. 15	16,000	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa.	Sept. 14	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Sept. 7	15,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended August 31 corresponded to an annual rate of 16.9 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Derby, viz, 9.0, and the highest in Wolverhampton, viz, 29.7 a thousand. Diphtheria caused 4 deaths in Manchester, 3 in Salford, 2 in Blackburn, and 2 in Sheffield.

London.—One thousand two hundred and sixty-three deaths were registered during the week, including measles, 12; scarlet fever, 17; diphtheria, 32; whooping-cough, 21; enteric fever, 12; diarrhœa and dysentery, 78, and cholera and choleraic diarrhœa, 1. The deaths from all causes corresponded to an annual rate of 15.1 a thousand. Diseases of the respiratory organs caused 148 deaths. In greater London 1,600 deaths were registered, corresponding to an annual rate of 14.8 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 31; whooping-cough, 9; and diphtheria, 8.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended August 31, in the 16 principal town districts of Ireland, was 22.1 a thousand of the population. The lowest rate was recorded in Lisburn, viz, 0.0, and the highest in Waterford, viz, 34.7 a thousand. In Dublin 180 deaths were registered, including typhus, 1; enteric fever, 5; diarrhœa, 25; whooping-cough, 1, and dysentery, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended August 31 corresponded to an annual rate of 17.6 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Greenock, viz, 12.6, and the highest in Paisley, viz, 25.8 a thousand. The aggregate number of deaths registered from all causes was 449, including measles, 7; scarlet fever, 5; diphtheria, 7; whooping-cough, 19; fever, 5; and diarrhœa, 31.

During the quarter ended June 30, 1889, 18,213 deaths were registered in Scotland, corresponding to an annual rate of 17.9 a thousand of the population.

In the principal town districts the number of deaths registered corresponded to an annual rate of 20.6 a thousand. The deaths from all causes numbered 2,562 in April, 2,469 in May, and 2,041 in June. The deaths during the quarter included measles, 363; scarlet fever, 51;

whooping-cough, 504; diphtheria, 90; fevers, 41; and diarrhœa and dysentery, 129.

BRAZIL—*Maceio.*—Month of July, 1889. Population, 17,000. Total number of deaths, 76, including 162 from small-pox.

BAHAMAS—*Nassau, N. P.*—August 31, 1889. General health good.

TURKEY—

CONSULATE GENERAL OF THE UNITED STATES,
Constantinople, August 30, 1889.

SIR: I have the honor to inform you that a serious outbreak of cholera is reported from Mesopotamia.

The death rate of different points in Mesopotamia is as follows:

Previously reported	1,050
Bassora, from 17th to 19th August	100
Bagdad, from 17th to 19th August	46
Shatia, from 15th to 19th August	4
Nasriyeh, from 17th to 18th August	11
Sukh-es Sheyuk, from 14th to 17th August	42
Romodyeh, from 14th to 15th August	32
Total	1,285

I have telegraphed Mr. Hayres, our consul at Bagdad, to send at once a full report upon the epidemic.

It is very difficult for me to obtain any information here concerning the cholera, as we are not represented upon the sanitary board, and no news relative to the epidemic is allowed to be published in the local press. I am, therefore, obliged to address myself to my colleagues in order to obtain any information on this subject. I would, therefore, strongly recommend the appointment of a delegate.

I have the honor to be, sir, your obedient servant,

D. LYNCH PRINGLE,
Consul-General.

Hon. WILLIAM F. WHARTON,
Assistant Secretary of State, Washington, D. C.

[From the *Journal d'Hygiene*, Paris, September 5, 1889.—Translation.]

ASIATIC TURKEY—*Cholera.*—The news given us by Dr. Gabuzzi, in his letter from Constantinople, under date of August 29, is alarming.

The cholera follows its march hitherward with greater and greater rapidity, confined to the south of Mesopotamia during the first five days of the month of August, in a triangle comprised between Bassora and Rumlyta (before Samawa). The epidemic rapidly traveled along the Tigris and made its appearance at Bagdad on August 14. To-day all the territory which centers in Bagdad, to the south of Bassora and to the north quite to Hanejuine, is infected.

The banks of the Euphrates, from Rousma to Musayeb, are also infected. The city of Bagdad is in desolation; it is nearly abandoned. The inhabitants are encamping in the environs of the city, on the northerly side, and on the 25th of August there were registered 100 deaths and 93 cases.

For the entire zone struck by the plague the bulletins of mortality give to this hour the total of 2,050 deaths.

The lazarettos and sanitary stations are beginning to be instituted for the protection of the region north of Bagdad.

[From *Der Deutsche Correspondent*, Baltimore, Md., September 14, 1889.—Translation.]

London, September 13.—Proofs are at hand that cholera is raging in Constantinople, although the cases that have appeared till now have been kept secret or designated as malignant fever. The disease is exactly the same as that raging in Smyrna and Beirut. It has taken its usual route out of India through the Euphrates Valley and Syria. For a long time the pestilence has been raging, in a malignant form, in the southern part of India, particularly at Gohun, and from there it has been carried away. It has been reported that cholera has also made its appearance in separate cases in Greece and even already in Hungary.

GREECE—*Athens.*—The United States consul telegraphs as follows, under date of September 18, 1889:

STATE DEPARTMENT, *Washington:*

No case of Asiatic cholera has appeared in Athens; city perfectly healthy.

NETHERLANDS.—The deaths registered in the principal cities of the Netherlands, having an aggregate population of 1,129,678, during the month of July, 1889, corresponded to an annual rate of 25.5 a thousand. The lowest rate was recorded in Leyden, viz, 15, and the highest in Maastricht, viz, 32.2 a thousand. The deaths included enteric and typhus fever, 10; scarlet fever, 2; measles, 59; whooping-cough, 30; diphtheria, 20, and diarrhœa and dysentery, 60.

ARGENTINE REPUBLIC—*Buenos Ayres.*—Month of June, 1889. Population, 510,017. Total deaths, 1,181, including small-pox, 8; enteric fever, 30, and diphtheria, 51.

DENMARK.—The Danish Government has issued a proclamation, under date of August 19, 1889, stating that, as the small-pox epidemic in Trieste has ceased, the proclamation of April 27, 1887, in regard to ships coming from said city, is suspended. There is no quarantine at Copenhagen.

CUBA—*Havana.*—Fifteen deaths from yellow fever for the week ended September 6, 1889.

Cardenas.—September 7, 1889. Good health in town and harbor.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Aug. 24	5,642,015	1,604	.....	.....	.....	.....	11	21	39	12	.....
London	Aug. 31	5,642,015	1,600	.....	.....	.....	.....	12	22	40	16	.....
Paris	Aug. 31	2,260,945	904	.....	.....	6	.....	22	3	18	13	11
Glasgow	Aug. 31	545,678	195	.....	.....	.....	.....	2	1	5	.....	11
Warsaw	Aug. 24	445,770	251	.....	.....	11	.....	.....	8	4	.....	.....
Calcutta	Aug. 3	433,219	210	4	.....	.....	.....	.....	.....	.....	.....	.....
Amsterdam	Aug. 31	399,051	142	.....	.....	.....	.....	.....	.....	3	.....	.....
Copenhagen	Aug. 24	307,000	129	.....	.....	.....	.....	3	.....	7	.....	.....
Munich	July 20	281,000	215	.....	.....	.....	.....	.....	2	5	.....	.....
Munich	July 27	281,000	237	.....	.....	.....	.....	2	1	8	.....	.....
Munich	Aug. 24	281,000	153	.....	.....	.....	.....	.....	4	2	.....	.....
Edinburgh	Aug. 24	266,900	75	.....	.....	.....	.....	2	1	3	2	3
Edinburgh	Aug. 31	266,900	83	.....	.....	.....	.....	2	3	1	.....	.....
Palermo	Aug. 31	250,000	84	.....	.....	.....	.....	.....	1	1	.....	.....
Belfast	Aug. 31	229,622	108	.....	.....	.....	.....	5	1	.....	.....	.....
Rotterdam	Aug. 31	197,724	92	.....	.....	.....	.....	.....	.....	.....	4	.....
Genoa	Aug. 31	180,232	73	.....	.....	.....	1	.....	.....	1	.....	.....
Stuttgart	Aug. 31	125,510	47	.....	.....	.....	.....	.....	.....	1	.....	.....
Pernambuco	Aug. 13	120,000	105	.....	.....	.....	1	1	1	.....	.....	.....
Havre	Aug. 31	112,074	63	.....	.....	1	.....	3	.....	1	.....	.....
Barmen	Aug. 24	109,000	38	.....	.....	.....	.....	.....	.....	1	1	.....
Barmen	Aug. 31	109,000	26	.....	.....	.....	.....	.....	.....	.....	.....	2
Catania	Sept. 1	108,000	.....	.....	.....	.....	.....	2	1	.....	.....	.....
Leith	Aug. 17	76,400	23	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	Aug. 24	76,400	26	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	Aug. 31	76,400	35	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Aug. 17	65,802	36	.....	.....	.....	.....	.....	1	4	.....	.....
Mayence	Aug. 24	65,802	27	.....	.....	.....	.....	.....	.....	3	.....	.....
Cadiz	Aug. 31	65,028	40	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cienfuegos	Sept. 2	40,655	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
Guayaquil	Aug. 21	35,000	55	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Sept. 5	23,800	22	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Aug. 25	23,631	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Sept. 6	20,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Sept. 13	20,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 39. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., September 27, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended September 27, 1889, published in accordance with section 4, Act of Congress, approved April 29, 1878.

UNITED STATES.

DELAWARE BREAKWATER QUARANTINE STATION.—Acting Assistant Surgeon Wm. P. Orr, writes as follows, under date of September 17, 1889:

The storm of the past week, which passed along this and the Jersey coast with such disastrous results to the shipping and other property, did not do any very serious damage to the hospital buildings proper. The two hospital buildings are on hills, so that nothing short of a tidal wave could wash them away. The newspapers have published all sorts of absurd stories about the station, in one of which the hospital, with me in it, was washed out to sea. * * * The sea was so high that the land around the hospital was submerged, and the out-buildings surrounded by water. The most serious damage was to the boat-house. I am now waiting to get a carpenter to come down to the station to make an estimate of the cost of necessary repairs, but it will be impossible to get anything done for a month, because the carpenters and laboring men of every trade and calling are reaping a harvest in wrecking the vessels stranded on the beach near Lewes, of which there are twenty-two. I have taken a number of sick or injured seamen from the wrecked vessels into the hospital.

CHARLESTON, S. C.—The following letter has been received from H. B. Horlbeck, M. D., health officer, under date of September 18, 1889:

I received yesterday a note from Dr. Burgess, sanitary inspector at Havana, notifying me that the Spanish bark Tuya had sailed for Charleston on the 10th instant, and that he had ascertained after she left that there had been a case of yellow fever from same sent ashore, which had resulted favorably. The Tuya arrived yesterday, and has been sent to-day to Sapelo.

Reports of States, and Yearly and Monthly Reports of Cities.

CONNECTICUT—*New Haven.*—Month of August, 1889. Population, 85,000. Total deaths, 113, including scarlet fever, 1; enteric fever,

6; whooping-cough, 4, and diphtheria and croup, 3. Nine cases of scarlet fever, 7 of enteric fever, and 8 of diphtheria were reported during the month.

ILLINOIS—*Chicago.*—Month of August, 1889. Population, 1,100,000. Total deaths, 1,703, including diphtheria, 72; scarlet fever, 12; enteric fever, 64; measles, 12, and whooping-cough, 12.

MASSACHUSETTS—*Newton.*—Month of August, 1889. Population, 21,553. Total deaths, 27, including enteric fever, 1, and whooping-cough, 1.

Worcester.—Month of August, 1889. Population, 82,000. Total deaths, 106, including diphtheria, 2; enteric fever, 2, and whooping-cough, 4.

MICHIGAN.—Week ended September 14, 1889. Reports to the State board of health, Lansing, from 73 observers, indicate that whooping-cough, cholera morbus, enteric fever, and neuralgia decreased in area of prevalence. Diphtheria was reported present during the week, and since, at 16 places; scarlet fever at 9 places; enteric fever at 21 places, and measles at 3 places.

MINNESOTA.—Second quarter of 1889. Total deaths from all causes, 2,985, including measles, 59; scarlet fever, 109; diphtheria, 190; whooping-cough, 26, and enteric fever, 70.

The following is an extract from the Supplement to Public Health, No. 6, Vol. 5:

Measles.—Comparing the returns of deaths in 1888 and 1889 by quarters, it had three times the mortality and distribution in the first quarter, but only half the mortality in the second quarter.

Scarlatina.—Three times the mortality distribution in the second quarter of 1889 as for same quarter of 1888. Compared by months the disease appears to be on the decline, the climax having occurred in April and May.

Croup.—Mortality in second quarter of 1889 somewhat less than for same last year, but distribution the same.

Diphtheria.—Compared by months in 1889, continues to decrease. The mortality during second quarter of 1889 is greater than for same quarter last year, but distribution about the same.

Typhoid Fever.—Mortality and distribution less in second quarter of 1889 than in same quarter last year.

Diarrhœal Diseases of Children.—Mortality continues to increase, being greater in 1889 than in 1888 during same period.

Bronchitis.—Mortality and distribution much less in 1889 than in 1888, comparing the second quarter.

Pneumonia and Pleurisy.—Decrease in mortality and distribution, comparing second quarter of each year.

RHODE ISLAND.—Month of August, 1889. Reports to the State board of health indicate the usual amount of general diseases not

zymotic, except pneumonia, which is reported as having been unusually prevalent for the season. Diarrhœal diseases were reported as having been, as usual in August, the most prominent in point of numbers, but in very much smaller numbers than usual. Of the infectious diseases, diphtheria was reported from 4 localities; scarlet fever from 4; measles from 5; whooping-cough from 10; enteric fever from 9, and malarial diseases from 12; nearly all occurring in forms of moderate severity. The deaths for the month included diphtheria, 8; enteric fever, 16; measles, 1; scarlatina, 2, and whooping cough, 11.

Newport.—Month of August, 1889. Population, 22,000. Total deaths, 37, including 2 from enteric fever.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Sept. 21	1,582,077	683	.....	.....	.....	.....	.....	.....	18	3	10	.....	8
Chicago, Ill.	Sept. 21	1,100,000	332	.....	.....	.....	.....	.....	.....	22	3	22	.....	5
Philadelphia, Pa.	Sept. 21	1,040,245	377	.....	.....	.....	.....	.....	.....	20	5	9	1	.....
Brooklyn, N. Y.	Sept. 21	834,607	325	.....	.....	.....	.....	.....	.....	5	.....	17	.....	2
Baltimore, Md.	Sept. 21	500,343	156	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....
St. Louis, Mo.	Sept. 21	450,000	165	.....	.....	.....	.....	.....	.....	5	.....	7	.....	.....
Cincinnati, Ohio.	Sept. 21	325,000	94	.....	.....	.....	.....	.....	.....	4	1	10	.....	.....
New Orleans, La.	Sept. 14	254,000	107	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Detroit, Mich.	Sept. 14	250,000	74	.....	.....	.....	.....	.....	.....	.....	1	4	.....	1
Cleveland, Ohio.	Aug. 10	235,000	130	.....	.....	.....	.....	.....	.....	2	1	3	1	1
Cleveland, Ohio.	Aug. 17	235,000	102	.....	.....	.....	.....	.....	.....	4	2	7	.....	.....
Pittsburgh, Pa.	Sept. 21	230,000	83	.....	.....	.....	.....	.....	.....	11	3	8	.....	.....
Louisville, Ky.	Sept. 21	227,000	52	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Rochester, N. Y.	Sept. 14	130,000	42	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Providence, R. I.	Sept. 21	127,000	46	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1
Indianapolis, Ind.	Sept. 20	124,450	32	.....	.....	.....	.....	.....	.....	1	1	2	.....	.....
Denver, Colo.	Sept. 20	100,000	31	.....	.....	.....	.....	.....	.....	7	.....	1	.....	1
Toledo, Ohio.	Sept. 20	89,000	21	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Fall River, Mass.	Sept. 21	69,000	29	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	1
Nashville, Tenn.	Sept. 21	65,153	21	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Charleston, S. C.	Sept. 21	60,145	50	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	Sept. 21	50,000	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Sept. 14	42,000	16	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....
Portland, Me.	Sept. 21	42,000	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Sept. 13	40,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	Sept. 11	32,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yonkers, N. Y.	Sept. 20	31,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Sept. 21	30,000	8	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Auburn, N. Y.	Sept. 21	26,000	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Haverhill, Mass.	Sept. 21	25,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa.	Sept. 21	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Sept. 14	15,000	5	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Pensacola, Fla.	Sept. 21	15,000	8	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended September 7 corresponded to an annual rate of 16.2 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Leicester, viz, 9.0, and the highest in Newcastle on Tyne, viz, 26.9 a thousand. Diphtheria caused 2 deaths in Liverpool and 2 in Preston.

London.—One thousand one hundred and seventy deaths were registered during the week, including measles, 9; scarlet fever, 18; diphtheria, 30; whooping-cough, 28; enteric fever, 21; typhus, 1; diarrhœa and dysentery, 68, and cholera and choleraic diarrhœa, 3. The deaths from all causes corresponded to an annual rate of 14.0 a thousand. Diseases of the respiratory organs caused 142 deaths. In greater London 1,507 deaths were registered, corresponding to an annual rate of 13.9 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 33; and scarlet fever, 2.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended September 7, in the 16 principal town districts of Ireland, was 20.4 a thousand of the population. The lowest rate was recorded in Dundalk, viz, 8.7, and the highest in Kilkenny, viz, 50.7 a thousand. In Dublin 126 deaths were registered, including typhus, 1; diarrhœa, 10; whooping-cough, 2; measles, 1, and dysentery, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended September 7 corresponded to an annual rate of 16.5 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Perth, viz, 11.1, and the highest in Glasgow, viz, 21.2 a thousand. The aggregate number of deaths registered from all causes was 423, including measles, 3; scarlet fever, 2; diphtheria, 9; whooping-cough, 18; fever, 10; and diarrhœa, 24.

Gibraltar.—The following notice is published under date of September 2, 1889:

The board of health, at a meeting held this day, decided that all vessels from ports in the Antilles, Continent of America, and Gulf of Mexico, situate on the Atlantic Ocean, between the equator and 34° north latitude, provided they have been seventeen days out, and bring clean bills of health from the British consul at the port of departure or call, and have health on board, shall be admitted to free pratique.

By order JOHN C. KING,
Secretary to the Board.

ARABIA—*Plague.*—The United States consul-general at Constantinople, in his dispatch to the Department of State, under date of August 23, 1889, says:

I have the honor to inclose the copy and translation of a communication received from the Russian consul-general in this city, regarding the plague in Arabia:

[Translation.]

CONSULATE GENERAL OF RUSSIA AT CONSTANTINOPLE,
August 14, 1889.

DEAR COLLEAGUE: I have the honor to inform you that according to an order of His Excellency the Governor-General of Odessa, issued in consequence of the established existence of plague in Arabia, all vessels bound for the ports of the Black Sea, coming from ports near the contaminated places, or those on board of which a case of this malady would appear during the voyage, must exclusively proceed to the lazaretto of Theodosea. Begging you kindly to bring the above to the notice of the captains of American vessels passing the Bosphorus bound for the Russian ports of the Black Sea, I repeat to you, dear colleague, the assurances of my most distinguished consideration.

LAGOWSKY.

FRANCE—*Marseilles.*—Month of August, 1889. Population, 375,378. Total deaths, 228, including small-pox, 11; cholera, sporadic, 1; enteric fever, 59; scarlet fever, 2; diphtheria and croup, 22; measles, 3; and whooping-cough, 5.

CUBA, *Havana.*—The following letter has been received:

SEPTEMBER 12, 1889.

SIR: The British bark "Jane Law," which cleared for New York on the 7th instant, took a bill of health on that date, in which it was stated that all of her crew were well except the mate, who was convalescing from an attack of yellow fever. On that day her crew mutinied and refused to work, and the vessel has remained here in harbor till to-day. I have just returned from making my second inspection when I found that one of the young sailors aboard was taken last night with symptoms of yellow fever, and so stated in bill of health. The vessel has proceeded to sea with the man.

Very respectfully, your obedient servant,

D. M. BURGESS,
Sanitary Inspector M. H. S.

To Surgeon-General J. B. HAMILTON.

Thirteen deaths were reported for the week ended September 13, 1889.

Cardenas.—September 13, 1889. Good health in town and harbor.

Santiago de Cuba.—Month of August, 1889. The greatest mortality during the month has been among the troops at the military hospital. One soldier died of small-pox and yellow fever, but the disease has not

spread. Only one case of yellow fever has been recorded during the whole month in the city. Only 79 deaths were reported in the city and suburbs, including the 23 cases of yellow fever at the military hospital. The United States consul states that it is extremely difficult to obtain these reports, and the delay in transmitting them lies with the health authorities of the city.

BRAZIL—*Paramaribo.*—Eighty-nine deaths were registered during the month of July, 1889, none of which were from contagious diseases.

MEXICO—*Acapulco.*—Month of August, 1889. Total number of deaths, 44, including small-pox, 3.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Sept. 7	5,642,015	1,507	.....	.....	.....	.....	21	25	33	11	.....
Glasgow	Sept. 7	545,678	215	.....	.....	.....	.....	6	.....	3	.....	.....
Warsaw	Aug. 31	445,770	285	.....	.....	28	.....	.....	5	9	.....	.....
Calcutta	Aug. 10	433,219	188	4	.....	.....	.....	.....	.....	2	.....	.....
Rome	July 6	407,936	135	.....	.....	.....	.....	3	1	2	.....	.....
Rome	July 13	407,936	175	.....	.....	.....	.....	4	.....	2	.....	.....
Amsterdam	Sept. 7	399,051	136	.....	.....	.....	.....	.....	1	1	.....	.....
Copenhagen	Aug. 31	307,000	111	.....	.....	.....	.....	2	1	8	.....	.....
Belfast	Sept. 7	229,622	113	.....	.....	.....	.....	4	1	1	.....	.....
Palermo	Sept. 7	250,000	79	.....	.....	.....	.....	.....	.....	3	.....	.....
Rotterdam	Sept. 7	197,724	54	.....	.....	.....	.....	1	.....	.....	.....	.....
Genoa	Sept. 7	180,253	78	.....	.....	1	3	.....	.....	1	.....	.....
Trieste	Aug. 24	154,500	89	.....	.....	.....	.....	.....	1	1	.....	.....
Trieste	Aug. 31	154,500	79	.....	.....	.....	.....	.....	1	3	.....	.....
Stuttgart	Sept. 7	125,510	30	.....	.....	.....	1	.....	.....	.....	.....	.....
Havre	Sept. 7	112,074	39	.....	.....	.....	.....	1	1	.....	.....	.....
Barmen	Sept. 7	109,000	34	.....	.....	.....	2	.....	.....	.....	.....	.....
Catania	Sept. 8	108,000	35	.....	.....	.....	.....	1	2	1	.....	.....
Mayence	Aug. 31	65,802	32	.....	.....	.....	.....	.....	.....	3	.....	.....
Cadiz	Sept. 7	65,028	39	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cienfuegos	Sept. 9	40,655	19	.....	2	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Sept. 12	23,800	27	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Sept. 1	23,681	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Colombia	Aug. 24	20,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Colombia	Aug. 31	20,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Colombia	Sept. 7	20,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	Aug. 10	15,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	Aug. 17	15,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	Aug. 24	15,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	Aug. 31	15,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	Sept. 7	15,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 40. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., October 4, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended October 4, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.

UNITED STATES.

Transfer of Land for the South Atlantic Quarantine.

NAVY DEPARTMENT,
Washington, September 16, 1889.

It appearing, by an indenture filed in this Department, dated April, 1800, that the title in fee to Black Beard Island, Sapelo Sound, State of Georgia, was conveyed by the marshal of the district of Georgia to the President of the United States, and his successors in office; that this Department has heretofore and still exercises jurisdiction and control over said island for naval purposes, and that the public interests will be subserved by transferring such jurisdiction and control to the Treasury Department of the United States for quarantine purposes; it is hereby ordered and directed, with the approval of the President, that Black Beard Island, Sapelo Sound, Georgia, be, and the same is hereby, so transferred and made subject to the use and control of the said Department for quarantine purposes, reserving, however, to the Navy Department all growing timber upon said island, and the right to cut and remove the same at all times.

B. F. TRACY,
Secretary of the Navy.

EXECUTIVE MANSION, *September* 27, 1889.

Approved.

BENJ. HARRISON.

FLORIDA—*Pensacola.*—The following letter has been received:

OFFICE OF THE BOARD OF HEALTH,
Pensacola, Fla., September 27, 1889.

SIR: The vessel "Salacia" left Rio de Janeiro about the beginning of August with a clean bill of health, and arrived off this port yesterday. Your Weekly Abstract of Sanitary Reports shows yellow fever prevailing there on that date, and, in accordance with the provisions

of our proclamation, we have notified the consignees of the vessel that she can not enter the port.

Your obedient servant,

WM. FISHER, *Secretary*,

To Surgeon-General J. B. HAMILTON.

Reports of States, and Yearly and Monthly Reports of Cities.

ILLINOIS—*Peoria.*—Month of August, 1889. Population, 40,000. Total deaths, 32. None from contagious diseases.

IOWA.—Month of September, 1889. Reports to the State board of health, Des Moines, show that scarlet fever was present in 2 places, diphtheria in 13 places, and measles in 1 place. The Monthly Bulletin says:

On the 26th of August Health-Officer Bailey reports a new case of small-pox, a boy about 6 years old, at Mount Ayr, and that the outlook is favorable for the disease for some time to come. And all this comes from an unfortunate reliance on vaccine virus that failed to work.

MICHIGAN.—Week ended September 21, 1889. Reports to the State board of health, Lansing, from 52 observers, indicate that inflammation of brain increased, and cholera infantum, remittent fever, cholera morbus, pneumonia, and influenza decreased in area of prevalence. Diphtheria was reported present during the week, and since, at 12 places; scarlet fever at 8 places; enteric fever at 22 places, and measles at 4 places.

NEW YORK.—Month of August, 1889. Reports to the State board of health from 128 cities and towns and 8 districts show a total of 9,372 deaths, as against 10,017 deaths during the same period in 1888. The deaths included enteric fever, 224; scarlet fever, 54; measles, 22; erysipelas, 10; whooping-cough, 133, and diphtheria and croup, 327. The Monthly Bulletin says:

The average mortality for August for the last five years is 8,668; that of August, 1889, is 9,373, which is less by 600 than that reported for August, 1888. The average proportion of infant mortality for five years is 45.5 per cent., and of deaths from zymotic diseases 332.27 per 1,000; for this month the proportions are respectively 40.7 and 280.75. From diarrhœal diseases there are fewer deaths than usual in August, and about 1,200 less than in July. There is an increase in typhoid fever, which began last month. The per cent. of deaths from this cause in August for four preceding years is 1.72; of this month it is 2.40. The increase over last year is principally in New York and Brooklyn; Binghamton reports an unusual number of deaths. Special prevalence is not reported from any place. Scarlet fever and measles are much less prevalent than a year ago. From consumption 109.40 deaths in each 1,000 occurred, and 193 per 1,000 deaths above the age of five years.

NEW HAMPSHIRE.—Month of August, 1889. From the Sanitary Volunteer, the official organ of the New Hampshire State board of health, the following is extracted:

The following contagious and infectious diseases were reported for the month of August:

Diphtheria.—Dover, 15; Manchester, 6; Claremont, 7; Newport, 6; Nashua, 6; Derry, 2; Rollinsford, 2, and Bethlehem, Concord, Moultonborough, Richmond, and Salem, 1 each.

Scarlet fever.—Manchester, 37—making a total of 186 cases since May 18; Tilton, 11; Berlin, 5; Concord, 6, and Laconia, Derry, and Claremont, 1 each.

Typhoid fever.—Manchester, 8 (3 imported); Claremont, 7; Concord, 6; Laconia, 5; Dover, 3; Hudson, 3; Bethlehem, 2, and Henniker, Hopkinton, Jaffrey, Walpole, Nashua, Moultonborough, and Weare 1 case each.

Measles.—Manchester, 1 case.

Manchester.—Month of August, 1889. Population, 42,000. Total deaths, 59, including diphtheria, 3; scarlet fever, 2, and enteric fever, 2.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Sept. 28	1,582,975	641	.....	.....	.....	.....	.....	.....	7	3	17	1	12
Philadelphia, Pa.	Sept. 28	1,040,245	312	.....	.....	.....	.....	.....	.....	15	2	3	.....	2
Brooklyn, N. Y.	Sept. 28	834,607	308	.....	.....	.....	.....	.....	.....	5	.....	13	.....	.....
Baltimore, Md.	Sept. 28	500,343	161	.....	.....	.....	.....	.....	.....	9	.....	5	.....	.....
St. Louis, Mo.	Sept. 28	450,000	157	.....	.....	.....	.....	.....	.....	7	2	5	.....	2
San Francisco, Cal.	Sept. 20	330,000	107	.....	.....	.....	.....	.....	.....	3	.....	3	.....	.....
New Orleans, La.	Sept. 21	254,000	130	.....	.....	.....	.....	.....	.....	.....	1	3	.....	1
Washington, D. C.	Sept. 21	250,000	93	.....	.....	.....	.....	.....	.....	8	.....	4	.....	1
Detroit, Mich.	Sept. 21	250,000	72	.....	.....	.....	.....	.....	.....	1	.....	6	.....	1
Cleveland, Ohio	Aug. 24	235,000	110	.....	.....	.....	.....	.....	.....	8	3	10	.....	1
Cleveland, Ohio.	Aug. 31	235,000	83	.....	.....	.....	.....	.....	.....	4	2	3	.....	1
Cincinnati, Ohio	Sept. 28	225,000	121	.....	.....	.....	.....	.....	.....	2	.....	14	.....	2
Minneapolis, Minn.	Sept. 21	200,000	43	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....
Minneapolis, Minn.	Sept. 28	200,000	50	.....	.....	.....	.....	.....	.....	6	.....	6	.....	.....
Providence, R. I.	Sept. 28	127,000	54	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1
Indianapolis, Ind.	Sept. 27	125,000	35	.....	.....	.....	.....	.....	.....	3	1	5	.....	.....
Richmond, Va.	Sept. 21	100,000	35	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Richmond, Va.	Sept. 28	100,000	35	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Denver, Colo.	Sept. 27	100,000	43	.....	.....	.....	.....	.....	.....	18	.....	1	1	1
Toledo, Ohio	Sept. 27	89,000	31	.....	.....	.....	.....	.....	.....	4	.....	3	.....	2
Fall River, Mass.	Sept. 28	69,000	28	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	1
Nashville, Tenn.	Sept. 28	65,153	26	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Charleston, S. C.	Sept. 28	60,145	56	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	Sept. 28	50,000	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Sept. 28	42,000	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Galveston, Tex.	Sept. 20	40,000	11	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
San Diego, Cal.	Sept. 19	32,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	Sept. 25	32,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yonkers, N. Y.	Sept. 28	20,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Sept. 28	30,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Auburn, N. Y.	Sept. 28	26,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Sept. 28	25,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Sept. 5	22,000	10	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Newport, R. I.	Sept. 12	22,000	12	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Newport, R. I.	Sept. 19	22,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Sept. 26	22,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Sept. 22	16,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended September 14 corresponded to an annual rate of 16.7 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Derby, viz, 13.2, and the highest in Plymouth, viz, 31.8 a thousand. Diphtheria caused 2 deaths in Manchester and 2 in Derby.

London.—One thousand two hundred and thirty-six deaths were registered during the week, including measles, 10; scarlet fever, 17; diphtheria, 41; whooping-cough, 18; enteric fever, 19; diarrhœa and dysentery, 68. The deaths from all causes corresponded to an annual rate of 14.8 a thousand. Diseases of the respiratory organs caused 152 deaths. In greater London 1,551 deaths were registered, corresponding to an annual rate of 14.3 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 19; whooping-cough, 7, and diphtheria, 4.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended September 14, in the 16 principal town districts of Ireland, was 21.1 a thousand of the population. The lowest rate was recorded in Wexford, viz, 4.3, and the highest in Newry, viz, 45.7 a thousand. In Dublin 166 deaths were registered, including scarlet fever, 1; enteric fever, 4; diarrhœa, 12, and dysentery, 3.

Scotland.—The deaths registered in 8 principal towns during the week ended September 14 corresponded to an annual rate of 19.1 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Paisley, viz, 12.5, and the highest in Dundee, viz, 23.6 a thousand. The aggregate number of deaths registered from all causes was 488, including measles, 9; scarlet fever, 3; diphtheria, 5; whooping-cough, 13; fever, 11, and diarrhœa, 38.

TURKEY IN ASIA—*Cholera.*—

DEPARTMENT OF STATE,
Washington, October 1, 1889.

SIR: I have the honor to state that, as I am informed by our minister at Teheran, the cholera in an epidemic form has appeared at Bassorah, Bagdad, and various places on the Euphrates.

I have the honor to be, sir, your obedient servant,

JAMES G. BLAINE.

The Honorable the SECRETARY OF THE TREASURY.

Cholera in Mesopotamia.

[From the Journal d'Hygiene, September 19, 1889.—Translation.]

Our correspondent at Constantinople informs us again this week that cholera has made new progress toward the north of Mesopotamia.

The following is Dr. Gabuzzi's letter of the 10th of September:

Traversing Diala River, cholera morbus passed over the first sanitary cordon established from Salanie to Zehrit, and on September 2d made its appearance at Zissyne, on the 4th at Selimie, on the 7th at Bomadi on the Euphrates, and on the 8th at Kerbouk. The epidemic is especially most murderous amongst the Arab tribes. The sanitary cordons have been extended farther North. The first extends along the Tigris and Euphrates, whilst the second penetrates into the province of Mossoul in order to cover the city of Van.

The official mortality bulletins for the zone stricken by the plague reaches 4,000, about (3,923) the number of deaths, but this number is surely below the truth, the impossibility of registering exactly the cases of morbidity and mortality in the midst of these infatuated hordes being taken into consideration.

DR. GABUZZI.

CONSTANTINOPLE, *September* 10, 1888.

DEMERARA.—September 2, 1889. No cases of any contagious or infectious disease during the month of August, 1889.

SPAIN.—*Cadiz.*—The United States consul, in his dispatch to the Department of State under date of September 11, 1889, says:

I deem it my duty to inform you that the present sanitary conditions of this city are bad. Were its situation and climate one degree less favorable, epidemics, in my opinion, would be perennial. The system of sewerage now in use originated with the city, and during the past centuries it has undergone no improvement. There are no such things as sewer man-holes, and water is used in sparing quantities. The water-closets after being used are flushed with dippers of water, instead of being flushed and flooded as we are accustomed to see it in the United States. There is scarcely a building in Cadiz that has not unwholesome smells to a greater or less degree, and many places on the streets are almost stifling.

That there is no excuse for the existence of such conditions is evidenced by the sea surrounding the city, and the additional fact that its natural drainage is almost perfect. One other thing assists to be foul; that is the filthy custom of making urinals of the walls of all buildings. In some parts of the town darkness is a license to make water-closets of the sidewalks. Every recess is used as a filth depository, and it not unfrequently happens that morning shows behind the outer entrance door of dwellings the excrement of some vagrant.

The result of this sanitary status is a death rate unsurpassed by any city of the same population.

At Gibraltar the death rate is about 20 per thousand per annum. At Cadiz it is fully 35, and I am of the opinion that accurate statistics would increase this figure. All deaths occurring on Sunday are not re-

ported. So far as I know there is no American or English governed city of the same size where the death rate is so high. Under proper sanitary regulations Cadiz would, I believe, be one of the most healthy cities in the world.

HONDURAS—*Ruatan.*—The United States consul, in his dispatch dated August 13, 1889, says:

Referring to my Nos. 237, 238, and 258, the latter dated November 1, 1888, relating to the sanitary condition of the ports of Ruatan and Truxillo, I have now to inform you that a fever similar in all respects to that described in the above-mentioned dispatches made its appearance in this port about six weeks since, causing the death of several soldiers and prisoners, besides the following-named persons of note:

1. His Excellency, Manuel Lopez, Civil and Military Governor of the Bay Islands, died June 25.
2. Captain Lara, died July 11.
3. Edward Fromann, a very promising young German-American, employed as private secretary in this consulate, died July 17.
4. Salvador Yngles, collector of customs at this port, died July 25.

On the 27th of July I was prostrated by the same fever, and believe that I owe my recovery to medical treatment quite different from that practiced in the cases above cited.

During the present month no new cases have been reported, and it is hoped and believed that the fever has disappeared.

CUBA—*Havana.*—Nine deaths from yellow fever are reported for the week ended September 20, 1889.

Santiago de Cuba.—The United States consul furnishes the following sanitary report for the first half of September, 1889:

Notwithstanding the continuous wet and stormy weather, the health of the city has not been worse during the first half of this month than during the same period in August. In fact, the death-rate from yellow fever at the military hospital outside the town limits has decreased. The health of the port has been excellent. Thirty-eight deaths were registered, including yellow fever in military hospital, 10; pernicious fever, 5, and diphtheria and croup, 2.

Cardenas.—September 20, 1889. Rainy weather, winds southerly, affected by a passing cyclone, probably to the southward.

DANISH WEST INDIES—*St. Thomas.*—Four hundred and sixty-two deaths were registered during the second quarter of 1889, including dysentery, 33; intestinal catarrh and acute diarrhœa, 104, and intermittent and remittent fever, 197.

INDIA—*Singapore*—Month of July, 1889. Total deaths, 598, including fevers, 177; bowel complaints, 90, and beri-beri, 6.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Sept. 14	5,642,015	1,551	.....	.....	.....	.....	19	20	45	11	.....
Paris	Sept. 6	2,260,945	890	.....	.....	1	.....	28	3	32	10	12
Paris	Sept. 14	2,260,945	867	.....	.....	5	.....	25	3	30	12	13
Glasgow	Sept. 14	545,678	200	.....	.....	.....	.....	4	.....	2	.....	.....
Warsaw	Sept. 7	445,770	244	.....	.....	26	.....	6	12	.....	.....	.....
Calcutta	Aug. 17	433,219	226	16	.....	1	.....	.....	.....	1	.....	.....
Rome	July 20	407,936	207	.....	.....	1	.....	1	.....	3	.....	.....
Rome	July 27	407,936	158	.....	.....	1	.....	4	.....	1	.....	.....
Amsterdam	Sept. 14	399,051	120	.....	.....	.....	.....	1	2	.....	.....	.....
Copenhagen	Sept. 7	307,000	104	.....	.....	.....	.....	1	.....	6	.....	.....
Palermo	Sept. 14	250,000	68	.....	.....	2	.....	.....	1	.....	.....	.....
Rotterdam	Sept. 14	197,724	62	.....	.....	.....	.....	.....	.....	.....	1	.....
Genoa	Sept. 14	180,274	76	.....	.....	.....	1	.....	.....	2	.....	.....
Trieste	Sept. 7	154,510	77	.....	.....	.....	.....	.....	.....	3	.....	.....
Stuttgart	Sept. 14	125,510	29	.....	.....	.....	.....	.....	.....	1	.....	.....
Pernambuco	Aug. 27	120,000	78	.....	.....	.....	.....	1	1	.....	.....	.....
Barmen	Sept. 14	109,000	25	.....	.....	.....	2	.....	.....	1	2	.....
Catania	Sept. 15	108,000	39	.....	.....	.....	.....	1	.....	.....	.....	.....
Leghorn	Sept. 15	103,142	41	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Sept. 7	65,802	31	.....	.....	.....	.....	.....	.....	1	.....	.....
Cadiz	Sept. 14	65,028	41	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cienfuegos	Sept. 16	40,655	17	.....	1	.....	.....	.....	.....	.....	.....	.....
Ceara	Aug. 3	29,000	42	.....	1	.....	.....	5	27	.....	.....	.....
Ceara	Aug. 10	29,000	45	.....	.....	.....	.....	.....	23	.....	.....	.....
Vera Cruz	Sept. 19	23,800	25	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Sept. 8	23,631	12	.....	.....	.....	.....	.....	.....	1	.....	.....
Kingston, Can	Sept. 20	20,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cartagena, Colombia	Sept. 14	20,000	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Aug. 23	13,500	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Aug. 30	13,500	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Sept. 6	13,500	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Sept. 13	13,500	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	Aug. 31	7,428	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	Sept. 7	7,428	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Guayra	Sept. 14	7,428	5	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract / No. 41. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., October 11, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended October 11, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.

UNITED STATES.

Special Reports.

FLORIDA—*Key West.—Yellow fever.*—Information has been received that certain cases of fever of a suspicious character have made their appearance at Key West. Dr. J. Y. Porter, acting for the State board of health, is now investigating the matter for the board.

[Telegram.]

Key West, October 9, 1889. Dr. Porter reports to Dr. Daniel, president State board of health, that upon investigation made to-day he finds several cases of yellow fever at Key West. No need of apprehension. Has taken all precautions on acclimation certificates.

J. L. POSEY, M. D.

JACKSONVILLE, *October* 5, 1889.

SIR: I inclose copy of mortuary report* of the city health officer of Jacksonville for the month of September. During the past two weeks I have been requested by Dr. Daniel to visit 2 cases reported to him as supicious. They were both colored females, one a child of ten years the other an adult. The negro girl died after a week's illness; I saw her with City Health Officer Dr. Charles Burroughs, and after a close investigation the diagnosis of remittent malarial fever (congestive type) was fully established by symptoms and history of the case. The adult negress I visited was a patient of Dr. Matthews, and proved to be also a remittent malarial fever, and at the time of my visit was entirely free from fever and has since recovered. Both of these persons were here during the epidemic and had yellow fever. There have been no other cases reported to the board, and the city has enjoyed an exceptional immunity so far from sporadic cases, and the general sanitary condition is good. I have been in a position to know promptly of the occurrence of any sickness of a suspicious character, and availed myself of

*An extract from the report is published in the reports of cities, etc.

every opportunity to investigate rumors and reports coming from citizens, and through the police and sanitary force, as well as information received by the State board.

Very truly yours,

J. L. POSEY, M. D.,
Sanitary Inspector, M. H. S.

Surgeon-General JNO. B. HAMILTON,
U. S. Marine-Hospital Service, Washington, D. C.

[From *Der Deutsche Correspondent*, Baltimore, Md., October 1, 1889.—Translation.]

ILLINOIS—*Chicago.—Small-pox.*—Chicago, September 30. Dr. F. D. Porter, of the Lake View board of health, was informed of the breaking out of a small-pox epidemic which threatens to assume a dangerous character. The first patient who has been attacked by the disease is a 15-year-old boy by the name of J. Welter, the son of well-to-do parents. The family has just returned from a visit abroad to their native place of Luxemburg, via Havre. On their landing from the steamer La Gascogne in the port of New York, all members of the family passed the quarantine untroubled. But while on the train going West the disease broke out in young Welter. His parents at first supposed him to be afflicted with measles, but as his fever continued increasing very strongly, they became anxious about him.

On their arrival in this city the boy was immediately taken home and a physician summoned, who, after two days, declared it to be a case of undoubted black small-pox. He reported this to Dr. Porter, who directly had all children living in the neighborhood vaccinated. Yesterday all school children living more distant from the location of the disease were also vaccinated. In spite of this the eruption of a small-pox epidemic is to be feared, for the boy, during the long railroad journey, came in contact with hundreds of persons, and during the first two days that he was here, when the dangerous character of his disease was not yet recognized, many of his school-mates visited him and shook hands with him.

LOUISIANA—*New Orleans.—Yellow fever.*—The following telegram was received too late for publication in Abstract No. 40:

OCTOBER 3, 1889.

A case of yellow fever died here this morning. Was brought from Livingston, Guatemala, and passed inspection at quarantine by appearing on deck at muster. Full particulars by mail.

LUCIEN F. SALOMON, M. D.

Also, the following letter and report relative to the above:

BOARD OF HEALTH STATE OF LOUISIANA,
New Orleans, October 3, 1889.

DEAR SIR: As telegraphed you to-day, a man died in this city of yellow fever. The particulars of the case are as follows: Mr. E. De Villa, United States consular agent for the United States of Colombia, had been at Guatemala City, and from there went overland to Livingston, Guatemala, where he took passage on the steam-ship City of Dallas for New Orleans on the 26th of September. The second day out he was taken with a chill followed by fever, but did not keep to his berth

after the chill. He continued to feel ill during the voyage, but before arrival of the vessel at the Mississippi quarantine he dressed himself and went on deck, thus passing inspection by the quarantine officer. The master of the vessel made affidavit that there had been no one sick during the voyage. The vessel had a clean bill of health, and there being to our positive knowledge no yellow fever at Livingston, the vessel, after being disinfected, was allowed to proceed to New Orleans, where she arrived at 8 p. m., October 1.

The man was seen by Dr. J. J. Castellanos, October 2, had had fever, nausea, hiccough, pain in the region of the stomach, and bilious vomiting. When seen again at night he was vomiting black vomit, followed by black hemorrhagic stools. This morning (October 3) black vomit still persistent, urinary suppression, hiccough, and uræmic convulsions.

Dr. Castellanos immediately reported above facts to this office, and a commission of experts, composed of Drs. J. P. Davidson, C. J. Bickham, and George Howe, was summoned and requested to see the case and pass upon it.

In the mean time the man had died (11.35 a. m.), and at 2 p. m. the above-named physicians, with Dr. Castellanos and Dr. R. Matas, who had been called in consultation, proceeded to the house, No. 149 Decatur street, and after obtaining a history of the case and holding an autopsy, unanimously declared the case to be yellow fever.

Inclosed is a copy of the commission's report.

Every precaution has been taken to prevent spread of the disease. The premises have been isolated and thoroughly disinfected, and there is no danger to be apprehended.

The body was properly cared for and interred without delay.

Should any further developments occur in connection with the case you will be immediately notified. In the mean time there is no cause for alarm.

Yours respectfully,

LUCIEN F. SALOMON, M. D.,
Secretary Board of Health State of Louisiana.

Dr. JOHN B. HAMILTON,
Surgeon-General, U. S. Marine-Hospital Service.

NEW ORLEANS, *October* 3, 1889.

The undersigned members of the committee of experts on yellow fever appointed by the Louisiana State board of health, beg leave to report that at the request of the acting president of the board, Dr. S. D. Kennedy, made an examination of the body of D. DeVilla, exposed at 149 Decatur street. The deceased presented the form of a stout man in full flesh, apparently about thirty-five years of age. The face was more or less livid, skin generally icterosed, the adnata injected and yellow, pupils dilated, gums firm but turgid. They proceeded to make an autopsy, and found the following appearances: There was a great thickness of adipose tissue along the line of incisions in opening the cavity of the abdomen. Removing the stomach they found it to contain about 6 ounces of fluid which, on being poured into a vessel, presented all the characteristics of black vomit, the coffee-ground sediment pecu-

liar to it being well defined. The mucous membrane showed ecchymosed spots, chiefly at the cardiac extremity and along the larger curvature, and was readily scraped off at those points. The liver was firm, rather smaller than usual, of a saddle-leather color, and showing but little engorgement on being cut. The gall-bladder was quite empty. The spleen was small, rather paler than common, and quite firm upon pressure. The kidneys were enlarged, and engorged with blood. The bladder yielded somewhere about an ounce of turbid urine, which on being boiled and treated with nitric acid, contained from 25 to 30 per cent. of albumen. The deceased died with an uremic convulsion.

These pathological conditions satisfy us in deciding that death ensued from yellow fever.

J. P. DAVIDSON, M. D.,
Chairman of Committee.
C. J. BICKHAM, M. D.
GEORGE HOWE, M. D.

Reports of States, and Yearly and Monthly Reports of Cities.

FLORIDA—*Jacksonville.*—Month of September, 1889. Population, 30,000. Total deaths, 56, including enteric fever, 5; and whooping-cough, 2.

ILLINOIS—*Galesburg.*—Month of September, 1889. Population, 17,000. Total deaths, 9, including scarlet fever, 1; and enteric fever, 1.

IOWA—*Keokuk.*—Month of August, 1889. Population, 16,000. Total deaths, 13, including scarlet fever, 1

Month of September, 1889. Total deaths, 8, including enteric fever, 1.

MICHIGAN.—Four weeks ended September 28, 1889. Reports to the State board of health, Lansing, from 228 observers, indicate that compared with the preceding month typho-malarial fever, whooping-cough, enteric fever, and diphtheria increased, and cholera morbus, erysipelas, and inflammation of the bowels decreased, in prevalence. Diphtheria was reported present during the month at 38 places; scarlet fever at 20 places; enteric fever at 47 places, and measles at 7 places. Reports from all sources show diphtheria present at 13 places more, scarlet fever at 2 places more, and enteric fever at 7 places more than in the preceding month. The following memorandum accompanies the monthly report:

MEMORANDUM ACCOMPANYING MONTHLY BULLETIN OF HEALTH IN MICHIGAN FOR SEPTEMBER, 1889.

The bulletins Health in Michigan, heretofore issued by the secretary of the State board of health, have mentioned the increase or decrease of those diseases in which a difference of 7 or more was shown between the per cents of reports stating the presence of the disease in the

current week or month and in the preceding week or month, or in the corresponding month in previous years.

Hereafter those diseases will be mentioned of which the comparison shows an increase or decrease of 25 per cent. from the preceding week or month, or from the normal, as the case may be.

The new method has the effect of calling attention to changes in the prevalence of diseases, which, like diphtheria and scarlet fever, are important, yet which, are not usually reported by a very large number of observers, and, therefore, under the old plan would not be mentioned.

HENRY B. BAKER,
Secretary.

LANSING, MICH., *October* 3, 1889.

Week ended September 28, 1889. Reports from 53 observers indicate that remittent fever, pneumonia, and enteric fever increased, and that cholera morbus and inflammation of the brain decreased, in area of prevalence. Diphtheria was reported present during the week, and since, at 18 places; scarlet fever at 11 places; enteric fever at 31 places, and measles at 3 places.

MINNESOTA.—The following is an extract from Public Health, the official publication of the State board of health:

DISTRIBUTION AND MORTALITY FROM SPECIFIED DISEASES IN MINNESOTA FOR THE MONTH OF AUGUST, 1889, AS REPORTED UP TO SEPTEMBER 20.

[Population estimated 1889, cities over 2,000 inhabitants, 539,000; towns and villages, 1,047,860.]

Total number of deaths, 996, an increase of 58 over last month, 582 males, 414 females; 57 per cent. occurred in cities over 2,000 population, against 68 per cent. last month. Ages, under 1 year, 46 per cent.; 1 to 5 years, 11.5 per cent.; 5 to 15 years, 6 per cent.; 15 to 30 years, 11 per cent.; 30 to 50 years, 9.13 per cent.; 50 to 70 years, 9.8 per cent.; over 70 years, 6 per cent. Of 461 deaths under 1 year old, 54 per cent. were in cities; from 1 to 5 years, 59 per cent. in cities.

Measles.—Five deaths (2 males, 3 females), in 4 localities, 4 counties; 80 per cent. occurred in cities. Ages, 2 under 1 year; one 1 to 2 years; two 5 to 10 years. Mortality and distribution one-half compared with last month.

Scarlatina.—Sixteen deaths (9 males, 7 females), in 8 localities, 7 counties; 31.25 per cent. occurred in cities. Ages, 81.25 per cent. under 5 years; 18.75 per cent. between 5 and 15 years. Mortality greater; but distribution same as last month.

Diphtheria.—Twenty-seven deaths, (12 males, 15 females), in 10 localities, 10 counties; 71 per cent. occurred in cities. Ages, under 5 years, 33 per cent.; between 5 and 15 years, 59 per cent.; an increase in mortality and distribution compared with last month; but about half that of same month last year.

Typhoid fever.—Forty deaths (21 males, 19 females), in 18 localities, 18 counties; 72.5 per cent. occurred in cities. Ages, under 10 years, 7.5 per cent; between 10 and 20 years, 60 per cent.; between 20 and 40 years, 17 per cent. As expected, approaching fall, mortality and dis-

tribution greatly increased compared with last month; but less than for same month last year.

NEW JERSEY—*Hudson County.*—Month of August, 1889. Population, 282,254. Total deaths, 591, including measles, 1; scarlet fever, 2; diphtheria, 24; whooping-cough, 12, and enteric fever, 12.

PENNSYLVANIA—*Williamsport.*—Month of September, 1889. Population, 35,271. Total deaths, 24, including enteric fever, 3.

TEXAS—*San Antonio.*—Month of September, 1889. Population, 50,000. Total deaths, 70, including diphtheria, 1, and enteric fever, 6.

VIRGINIA—*Petersburg.*—Month of September, 1889. Population, 25,000. Total deaths, 56; none from contagious diseases.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Oct. 5	1,583,873	605	.....	.....	.....	.....	.....	.....	14	5	13	2	6
Chicago, Ill.	Oct. 5	1,100,000	356	.....	.....	.....	.....	.....	.....	9	1	26	.....	2
Brooklyn, N. Y.	Oct. 5	843,602	296	.....	.....	.....	.....	.....	.....	4	.....	20	.....	4
Baltimore, Md.	Oct. 5	500,343	131	.....	.....	.....	.....	.....	.....	4	1	2	.....	.....
St. Louis, Mo.	Oct. 5	450,000	135	.....	.....	.....	.....	.....	.....	8	3	9	.....	.....
San Francisco, Cal.	Sept. 27	330,000	125	.....	.....	.....	.....	.....	.....	3	.....	5	.....	.....
Cincinnati, Ohio.	Oct. 5	325,000	102	.....	.....	.....	.....	.....	.....	1	.....	19	.....	.....
New Orleans, La.	Sept. 28	254,000	102	.....	.....	.....	.....	.....	.....	2	.....	3	.....	.....
Washington, D. C.	Sept. 28	250,000	.....	.....	.....	.....	.....	.....	.....	6	.....	7	.....	1
Washington, D. C.	Oct. 5	250,000	.....	.....	.....	.....	.....	.....	.....	6	.....	6	.....	.....
Detroit, Mich.	Sept. 28	250,000	76	.....	.....	.....	.....	.....	.....	2	.....	4	.....	.....
Cleveland, Ohio.	Sept. 7	235,000	95	.....	.....	.....	.....	.....	.....	3	1	6	.....	3
Cleveland, Ohio.	Sept. 14	235,000	112	.....	.....	.....	.....	.....	.....	3	.....	5	1	.....
Pittsburgh, Pa.	Sept. 30	230,000	103	.....	.....	.....	.....	.....	.....	8	2	6	.....	.....
Pittsburgh, Pa.	Oct. 5	230,000	84	.....	.....	.....	.....	.....	.....	6	3	8	.....	.....
Louisville, Ky.	Oct. 5	227,000	49	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....
Minneapolis, Minn.	Oct. 5	200,000	48	.....	.....	.....	.....	.....	.....	5	.....	8	.....	.....
Kansas City, Mo.	Oct. 5	180,000	30	.....	.....	.....	.....	.....	.....	5	.....	1	.....	.....
Denver, Colo.	Oct. 4	135,000	77	.....	.....	.....	.....	.....	.....	20	1	1	.....	.....
Rochester, N. Y.	Sept. 28	130,000	29	.....	.....	.....	.....	.....	1	.....	.....	1	.....	.....
Providence, R. I.	Oct. 5	127,000	38	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Indianapolis, Ind.	Oct. 4	124,450	26	.....	.....	.....	.....	.....	.....	1	.....	5	.....	.....
Richmond, Va.	Oct. 5	100,000	35	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Toledo, Ohio.	Oct. 4	89,000	29	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
Fall River, Mass.	Oct. 5	69,000	47	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	1
Nashville, Tenn.	Oct. 5	65,153	17	.....	.....	.....	.....	.....	.....	2	.....	1	.....	1
Charleston, S. C.	Oct. 5	60,145	36	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	Oct. 5	50,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Sept. 28	42,000	19	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Portland, Me.	Oct. 5	42,000	14	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Galveston, Tex.	Sept. 27	40,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Oct. 6	30,000	11	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Auburn, N. Y.	Oct. 5	26,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Haverhill, Mass.	Oct. 5	25,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Oct. 3	22,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Sept. 14	21,553	6	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Newton, Mass.	Sept. 21	21,553	6	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Newton, Mass.	Oct. 5	21,553	4	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Rock Island, Ill.	Sept. 29	16,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Oct. 6	16,000	8	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....
Keokuk, Iowa.	Sept. 28	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa.	Oct. 5	16,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended September 21 corresponded to an annual rate of 17.0 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz, 12.4, and the highest in Preston, viz, 27.5 a thousand. Diphtheria caused 4 deaths in Manchester, 3 in Derby, 3 in Sheffield, 3 in Preston, and 2 in Birmingham; small-pox caused 1 death in Sheffield.

London.—One thousand two hundred and sixty-seven deaths were registered during the week, including measles, 3; scarlet fever, 25; diphtheria, 44; whooping-cough, 26; enteric fever, 11; diarrhœa and dysentery, 73. The deaths from all causes corresponded to an annual rate of 15.2 a thousand. Diseases of the respiratory organs caused 142 deaths. In greater London 1,593 deaths were registered, corresponding to an annual rate of 14.7 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 19; scarlet-fever, 7; whooping-cough, 7, and diphtheria, 7.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended September 21, in the 16 principal town districts of Ireland, was 23.9 a thousand of the population. The lowest rate was recorded in Wexford, viz, 8.6, and the highest in Dublin, viz, 28.4 a thousand. In Dublin 193 deaths were registered, including diphtheria, 1; whooping-cough, 1; scarlet fever, 1; enteric fever, 7; diarrhœa, 14, and dysentery, 4.

Scotland.—The deaths registered in 8 principal towns during the week ended September 21 corresponded to an annual rate of 16.4 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Perth, viz, 9.5, and the highest in Paisley, viz, 22.4 a thousand. The aggregate number of deaths registered from all causes was 419, including measles, 5; scarlet fever, 6; diphtheria, 6; whooping-cough, 15; fever, 6, and diarrhœa, 36.

AUSTRIA—*Trieste.*—Dr. J. F. Hartigan, United States consul, writes as follows under date of September 17, 1889:

* * * No United States vessels come to this port. They are mainly English, and the exports consist mostly of insect flowers and powder, dried prunes, cuttle-fish bones, sardines, beans, sponges, drugs, oils, etc. Compared with former years, the shipment of rags has very greatly diminished. They are gathered mainly at present in the city and surroundings, also from the interior 80 miles, but so far as I know at this time are not subjected to supervision by any local authorities. The shipper, however, is required to certify in the invoice, by the regu-

lations of this office, that they were not collected from infected places; the same being the case with hides and skins. The city or sanitary physician of Trieste issues a document to this effect over his own seal and signature, and based upon his personal knowledge. * * * The seemingly high mortality here is due mainly to the unusual proportion of illegitimate children among the lower classes, the monthly report of vital statistics showing, out of a total of 86 deaths, 31 of illegitimate children under a year old.

CUBA—*Havana.*—There were 527 deaths during the month of September. Forty-seven of these deaths were caused by yellow fever, 22 by enteric fever, 32 by so-called pernicious fever, 4 by paludal fever, 11 by diphtheria and croup, and 1 by glanders. Eleven of the deaths from yellow fever occurred in the military hospital; the remaining 36 were among civilians in different parts of the city.

There were 11 deaths from yellow fever during the week ended September 27, 1889.

The following telegram has been received:

Havana.—October 10, 1889. American schooner Robert Ruff sailed for Pascagoula yesterday with one case suspicious fever.

D. M. BURGESS, *Sanitary Inspector, M. H. S.*

The secretary of the State board of health of Mississippi has been notified accordingly.

Cardenas.—October 4, 1889. Good health in town and harbor. Weather dry and warm.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Sept. 21	5,642,015	1,593	.....	.....	.....	.....	11	32	51	5	.....
Paris	Sept. 21	2,260,945	935	.....	.....	3	.....	29	2	20	8	22
Glasgow	Sept. 21	545,678	175	.....	.....	.....	.....	3	2	4	.....	.....
Warsaw	Sept. 14	445,770	248	.....	.....	15	.....	.....	10	8	.....	.....
Calcutta	Aug. 24	433,219	243	5	.....	.....	.....	.....	.....	2	.....	.....
Amsterdam	Sept. 21	399,051	127	.....	.....	.....	.....	1	.....	1	.....	.....
Copenhagen	Sept. 14	307,000	117	.....	.....	.....	.....	3	1	7	.....	.....
Palermo	Sept. 21	250,000	58	.....	.....	.....	.....	.....	1	.....	.....	.....
Belfast	Sept. 21	229,622	98	.....	.....	.....	1	6	.....	2	.....	.....
Genoa	Sept. 21	180,311	64	.....	.....	.....	1	.....	.....	2	.....	.....
Trieste	Sept. 14	154,500	82	.....	.....	.....	.....	1	.....	2	.....	.....
Stuttgart	Sept. 21	125,510	52	.....	.....	.....	.....	.....	.....	1	.....	.....
Havre	Sept. 21	112,074	62	.....	.....	1	.....	2	.....	.....	1	.....
Barmen	Sept. 21	109,000	37	.....	.....	.....	.....	.....	.....	.....	.....	.....
Catania	Sept. 22	108,000	27	.....	.....	.....	.....	.....	.....	2	.....	.....
Leghorn	Sept. 22	103,142	46	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rheims	Sept. 21	97,903	46	.....	.....	.....	.....	3	1	.....	1	1
Mayence	Sept. 14	65,802	20	.....	.....	.....	.....	.....	1	2	.....	.....
Cadiz	Sept. 21	57,197	41	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Sept. 26	23,800	31	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Sept. 15	23,631	10	.....	.....	1	.....	.....	.....	.....	.....	.....
Kingston, Can	Oct. 4	20,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 42. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., October 18, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended October 18, 1889, ***published in accordance with section*** 4, ***Act of Congress, approved April*** 29, 1878.

UNITED STATES.

Special Reports.

FLORIDA—*Key West.—Yellow fever.*—The following letter has been received:

STATE BOARD OF HEALTH OF FLORIDA,
Jacksonville, Fla., October 12, 1889.

Sir: I inclose herewith for your information copies of communications from Dr. J. Y. Porter, State health officer, and Drs. Plummer and Murray, of Key West, relative to cases of "suspicious" fever at that place.

Very truly yours,

R. P. DANIEL,
President Florida State Board of Health.

Surgeon-General JOHN B. HAMILTON.

KEY WEST, FLA., *October* 9, 1889.

SIR: In conformity to your instructions of the 7th instant to visit this place and investigate the rumors of "suspicious fever" reported in the practice of Dr. J. St. V. R. Plummer, of this place, I left Jacksonville at once, and arrived here last night. I immediately had a conference with Dr. Sweeting, the county board of health officer, but learned nothing additional to what he had communicated to the State board of health in his letter of last Saturday, the 5th instant.

Early this a. m. I addressed a note to Dr. Plummer, and again at a later hour (copies of my letters and his answers are inclosed). At 10.45 a. m. I called on Dr. Plummer, and with him visited the cases deemed as having been "suspicious." I found them on Whitehead street, in the premises of Paul Seabrook (colored), and in the rear of said premises, upstairs. The patients are Wolff Abraham and his wife. Their history, as given by Dr. Plummer in their presence, is as follows: The wife was taken sick Saturday, September 28, but did not send for Dr. Plummer until the next day, Sunday, 29th. When he saw her for

the first time her temperature was 104.4° Fahr.; pulse, 110. The fever declined on the fourth day, and on the fifth day she had a temperature of 97.6° Fahr. On the third day the doctor says he found about 20 per cent. of albumen, but made no further tests. On the fourth day from the day he saw the wife the husband was taken sick with headache, injected eyes, and fever; temperature, 101°; no record of pulse; no test of urine; he was up on the fourth day. When I saw these people to-day they presented nothing abnormal in appearance of convalescents from any case of ordinary fever. The woman was sitting on the porch comparatively well; the man in the room, dressed and looking slightly invalided. On inquiry, I learned that the man was a Russian Jew, a tinware peddler, and had been in Key West since last October, coming here direct from New York. His wife had come direct from New York about six weeks ago; they had very few friends, and the woman speaking no English, visited none at all, and had no acquaintances. There is a boy of twelve years in the family, who has not, to this time, been taken sick.

It is exceedingly difficult at this period of the trouble to definitely state whether or not these cases were yellow fever. The suspicious features, according to the statement of the attending physician in the first case, are the definite duration of fever and disappearance after seventy-two hours; the appearance of albumen on the third day, the irritable stomach, and, in a measure, although this is not very marked, the subnormal temperature and the suspicious circumstances of the second case, which appears to have been not more than an ephemeral fever, is the attack four days after seizure of wife. I find every precaution has been taken by the attending physician to prevent the spread of the disease, although he declines to positively and definitely state the nature of the disease. The history, as imperfect as it is, gives reason for warrantable doubt and apprehension as to the true character of the fever that Wolff Abraham and his wife have suffered from, and it is exceedingly to be regretted that whilst the attending physician had his suspicions aroused, as he says, at once, yet he did not at the same time appreciate the gravity and importance of keeping full and careful clinical notes of these cases. The want of temperature and pulse charts, with other important notations, precludes beyond the possibility of a doubt the determining the true character of these cases, and which can now be only characterized as "suspicious." The statement of the attending physician on Sunday, the 29th, after seeing the patient (wife) *but once* that the case was suspicious, was not sufficient on which the county board would have been warranted in reporting yellow fever to the State board of health. Dr. Sweeting says he waited for further reports from Dr. Plummer, which were promised him in case the symptoms fulfilled his (Dr. Plummer's) suspicions, but hearing nothing from him for five days, he naturally concluded that the further symptoms failed to corroborate his doubts, and it was not until Friday, the 4th of October, that he learned of the detection of albumen on the third day of the sickness of the wife, and the subsequent attack of the husband.

I addressed a note to Dr. R. D. Murray, the Marine-Hospital surgeon here, and an expert in yellow fever, early this a. m., who saw the cases with Dr. Sweeting, asking his professional opinion of the character of these cases. I shall, acting upon the suspicious circumstances attending these cases, appraise, destroy, and pay for the bedding used by these parties, Wolff Abraham and his wife, and have their rooms

thoroughly disinfected. I do not think it necessary to take any further steps at this present, but will remain here, unless you order differently, for at least two weeks watching the situation.

Very respectfully,

JOSEPH Y. PORTER, M. D.,
State Health Officer.

DR. R. P. DANIEL,
President of the State Board of Health, Jacksonville, Fla.

U. S. MARINE HOSPITAL SERVICE,
DISTRICT OF THE GULF,
Port of Key West, Fla., Surgeon's Office, October 9, 1889.

DEAR DOCTOR: Your note of this date is noted. In response I have to say that in my opinion the patients referred to were suffering from yellow fever.

Sincerely yours,

R. D. MURRAY.

J. Y. PORTER, M. D.
State Health Officer, Key West, Fla.

CALIFORNIA.—*San Diego.—Atmospheric disturbances.*

U. S. QUARANTINE STATION,
San Diego, October 2, 1889.

SIR: The past week at this port has been noted particularly for an absence of our usual northwest winds, which have made San Diego so noted for delightfully cool and pleasant days during the summer, giving us a mean annual temperature of 61.3. We have had, instead of our customary ocean breeze, a hot north wind blowing up from the Mojave desert, caused by vast forest and brush fires, bringing great clouds of dust, sand, and smoke, making breathing difficult, obscuring the entire view oceanward, raising the temperature at times to 91.0, and reducing the humidity from an average of 72.0 to as low as 14.0, giving us with a high mean temperature a high mean barometer, just the reverse of what we usually have here with a high temperature. These winds blowing so strongly off the coast have prevented many vessels overdue from entering the harbor, and to these atmospheric disturbances may in part be attributed the unusually high death rate for the past two weeks.

Very respectfully,

W. W. McKAY,
Acting Assistant Surgeon, M. H. S., San Diego Quarantine.

To the SUPERVISING SURGEON-GENERAL:
U. S. Marine-Hospital Service, Washington, D. C.

Reports of States, and Yearly and Monthly Reports of Cities.

CALIFORNIA—*Los Angeles.*—Month of September, 1889. Population, 80,000. Total deaths, 58, including enteric fever, 3; diphtheria, 5; and whooping-cough, 1.

Sacramento.—Month of September, 1889. Population, 35,000. Total deaths, 30, including diphtheria, 1, and enteric fever, 1.

COLORADO—*Denver.*—Month of September, 1889. Population, 100,000. Total deaths, 174, including diphtheria, 4; enteric fever, 51; measles, 1; whooping-cough, 3; and scarlet fever, 1.

ILLINOIS—*Chicago.*—Month of September, 1889. Population, 1,100,000. Total deaths, 1,601, including diphtheria, 77; scarlet fever, 13; enteric fever, 77; measles, 1; and whooping-cough, 18.

IOWA—*Davenport.*—Month of September, 1889. Population, 33,715. Total deaths, 28, including diphtheria, 3, and enteric fever, 1.

Dubuque.—Month of September, 1889. Population, 35,000. Total deaths, 33. None from contagious diseases.

MASSACHUSETTS—*Fall River.*—Month of September, 1889. Population, 69,000. Total deaths, 86, including enteric fever, 12, and whooping-cough, 4.

There were 86 cases of contagious diseases reported during the month, including 1 of diphtheria, 5 of scarlet fever, 77 of enteric fever, and 3 of measles.

Worcester.—Month of September, 1889. Population, 82,000. Total deaths, 124, including enteric fever, 5; whooping-cough, 2; and diphtheria, 4.

MICHIGAN.—Week ended October 5, 1889. Reports to the State board of health, Lansing, from 53 observers, indicate that tonsillitis, typho-malarial fever, influenza, erysipelas, scarlet fever, puerperal fever, and membranous croup increased, and cholera infantum, inflammation of bowels, cerebro-spinal meningitis, inflammation of brain, and measles decreased in area of prevalence. Diphtheria was reported present during the week, and since, at 17 places; scarlet fever at 14 places; enteric fever at 36 places; and measles at 5 places.

Grand Rapids.—Month of September, 1889. Population, 75,000. Total deaths, 78, including diphtheria, 9; enteric fever, 7; and whooping-cough, 1.

MISSOURI—*St. Louis.*—Month of September, 1889. Population, 450,000. Total deaths, 651, including scarlet fever, 4; diphtheria, 23; whooping-cough, 3; and enteric fever, 22.

NEW YORK—*Rochester.*—Month of September, 1889. Population, 130,000. Total deaths, 172, including diphtheria, 3; enteric fever, 6; and whooping cough, 1.

OHIO—*Cincinnati.*—Month of September, 1889. Population, 325,000. Total deaths, 459, including diphtheria, 37; measles, 3; scarlet fever, 3; enteric fever, 14; and whooping-cough, 2.

RHODE ISLAND—*Newport.*—Month of September, 1889. Population, 22,000. Total deaths, 36, including enteric fever, 3.

TENNESSEE—*Chattanooga.*—Month of September, 1889. Population, 40,000. Total deaths, 44, including enteric fever, 1.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Oct. 12	1,564,771	573	.....	.....	.....	.....	.....	.....	8	4	19	1	7
Philadelphia, Pa.	Oct. 5	1,040,245	330	.....	.....	.....	.....	.....	.....	14	1	2	1	2
Philadelphia, Pa.	Oct. 12	1,040,245	331	.....	.....	.....	.....	.....	.....	.....	12	4	.....	3
Brooklyn, N. Y.	Oct. 12	843,602	294	.....	.....	.....	.....	.....	.....	7	1	20	.....	2
Baltimore, Md.	Oct. 12	500,343	141	.....	.....	.....	.....	.....	.....	1	2	3	.....	.....
St. Louis, Mo.	Oct. 12	450,000	146	.....	.....	.....	.....	.....	.....	4	6	6	.....	.....
San Francisco, Cal.	Oct. 4	330,000	120	.....	.....	.....	.....	.....	.....	6	1	3	.....	.....
Cincinnati, Ohio.	Oct. 12	325,000	89	.....	.....	.....	.....	.....	.....	12	1	4	.....	.....
New Orleans, La.	Oct. 5	254,000	113	.....	1	.....	.....	.....	.....	.....	.....	1	.....	.....
Detroit, Mich.	Oct. 5	250,000	66	.....	.....	.....	.....	.....	.....	2	.....	3	.....	.....
Washington, D. C.	Oct. 12	250,000	90	.....	.....	.....	.....	.....	.....	5	.....	8	.....	.....
Pittsburgh, Pa.	Oct. 12	230,000	95	.....	.....	.....	.....	.....	.....	5	1	10	.....	.....
Denver, Colo.	Oct. 11	135,000	41	.....	.....	.....	.....	.....	.....	13	.....	1	.....	.....
Rochester, N. Y.	Oct. 5	130,000	37	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	1
Providence, R. I.	Oct. 12	127,000	41	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Indianapolis, Ind.	Oct. 11	124,450	29	.....	.....	.....	.....	.....	.....	5	.....	2	.....	1
Toledo, Ohio.	Oct. 11	89,000	38	.....	.....	.....	.....	.....	.....	1	.....	7	.....	.....
Fall River, Mass.	Oct. 12	69,000	30	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Nashville, Tenn.	Oct. 12	65,153	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	Oct. 12	60,145	28	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	Oct. 12	53,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Oct. 12	42,000	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa.	Sept. 16	35,000	8	.....	.....	.....	.....	.....	.....	.....	.....	6	.....	.....
Council Bluffs, Iowa.	Sept. 22	35,000	5	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Council Bluffs, Iowa.	Sept. 29	35,000	9	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
Council Bluffs, Iowa.	Oct. 6	35,000	7	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....
San Diego, Cal.	Oct. 2	32,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	Oct. 9	32,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yonkers, N. Y.	Oct. 5	30,900	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yonkers, N. Y.	Oct. 12	30,900	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Oct. 12	30,000	10	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Auburn, N. Y.	Oct. 12	26,000	6	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Haverhill, Mass.	Oct. 12	25,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Oct. 10	22,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Oct. 12	21,553	8	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa.	Oct. 12	16,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Oct. 5	15,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended September 28 corresponded to an annual rate of 17.9 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Huddersfield, viz, 7.9, and the highest in Plymouth, viz, 32.7 a thousand. Diphtheria caused 3 deaths in Manchester, 3 in Salford, 4 in Portsmouth, and 2 in Plymouth.

London.—One thousand two hundred and sixty-seven deaths were registered during the week, including measles, 7; scarlet fever, 22; diphtheria, 44; whooping-cough, 23; enteric fever, 19; typhus, 2, and diarrhœa and dysentery, 78. The deaths from all causes corresponded to an annual rate of 16.3 a thousand. Diseases of the respiratory organs caused 189 deaths. In greater London 1,699 deaths were registered, corresponding to an annual rate of 15.7 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 15; scarlet-fever, 8; whooping-cough, 10, and diphtheria, 10.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended September 28, in the 16 principal town districts of Ireland, was 26.3 a thousand of the population. The lowest rate was recorded in Lisburn, viz, 0.0, and the highest in Dublin, viz, 30.7 a thousand. In Dublin 213 deaths were registered, including measles, 1; enteric fever, 6; diarrhœa, 21, and dysentery, 2.

NEW SOUTH WALES—*Queensland.*—One hundred and sixteen deaths were registered during the month of July, 1889, including enteric fever, 4; whooping-cough, 2, and diphtheria, 6.

PERSIA—*Cholera in Bushire.*—The following has been received at the Department of State:

LEGATION OF THE UNITED STATES,
Teheran, August 31, 1889.

SIR: Referring to my dispatch of the 23d instant, I have the honor to report that on the 26th I sent a telegram to our consular agent at Bushire, Mr. T. J. Malcolm, requesting information regarding the cholera at Bassorah, Bagdad, and Bushire.

Yesterday, the 30th instant, I received a letter from Mr. Malcolm, by inclosed copy of which you will observe that cholera had already made its appearance at Bushire on the 17th of the month; a copy of my answer to the above, under this day's date, I have also the honor to submit herewith for your consideration.

Immediately after mailing of letter just referred to I received a telegram from Mr. Malcolm, stating that up to yesterday no new cases of

cholera had developed at Bushire, and that an epidemic there was now no longer apprehended.

In my opinion, if the disease is introduced in the interior, it will be through the medium of the pilgrims returning from the holy shrines of Mecca, Medina, and Kerbellah, whose route was through the infected districts above Bagdad. It is for this reason that, when consulted on the subject by His Excellency Emin-el Mulk, acting prime minister, I strongly recommended the establishing of a sanitary cordon along the whole southwestern frontier, as well as quarantining against Bushire.

I have, sir, the honor to be, etc.,

E. SPENCER PRATT.

Hon. JAMES G. BLAINE,
Secretary of State, Washington, D. C.

[Inclosures.]

BUSHIRE, *August* 17, 1889.

To Hon. E. SPENCER PRATT,
U. S. Minister, etc., Teheran:

SIR: I regret to have to report the appearance of cholera at this place, the disease having been imported from Bassorah.

Your excellency's servant, etc.,

T. J. MALCOLM.

T. J. MALCOLM, Esq.,
U. S. Consular Agent, Bushire:

SIR: On Monday last, the 26th instant, I sent you a telegram, of which copy is inclosed, asking you to report to me regarding cholera at Bassorah, Bagdad, and Bushire.

I am now in receipt of your letter of the 17th instant announcing that at that time the disease in question had already made its appearance at Bushire, having been imported there from Bassorah.

My above-mentioned telegram, however, still remains unanswered.

Will you please endeavor to obtain and transmit the information for which it calls by return mail. Advise me as to what sanitary measures have been adopted in Bushire itself to prevent the disease becoming epidemic and arrest its further introduction, and whether the necessary steps have been taken to isolate the already infected district from intercourse with the interior.

I am, sir, etc.,

E. SPENCER PRATT.

GREECE—*Athens.*—The United States consul, in his dispatch dated September 18, 1889, says:

I have this morning sent cablegram as follows:

"No case of Asiatic cholera has appeared in Athens. City perfectly healthy."

The occasion for sending this is the inclosed newspaper dispatch which appeared in the New York Herald, London edition, of the 13th instant, the heading of which is utterly misleading and likely to do serious harm.

I am, sir, your obedient servant,

WILLIAM H. MOFFETT, *Consul.*

[Inclosure.—Cholera at Athens.—From the Herald's special correspondent.]

Athens, September 12. According to private dispatches received from Constantinople, a number of cases of Asiatic cholera have occurred in that city.

DENMARK.—The United States minister, in his dispatch to the Department of State under date of September 23, 1889, says:

I have the honor to inform you that I am notified by the Royal-Danish Government that, on account of contagious diseases now prevalent in Peru, Japan, and about the Persian Gulf, rigid quarantine measures will be enforced by this Government against ships coming from the ports in those countries. Also, that Sicily and Brazil, having ceased to be infected with contagious diseases, the restrictions heretofore placed upon vessels coming from their ports, by proclamation, are removed.

I have the honor to be, etc.,

CHARLES E. CARR.

AUSTRIA—*Trieste.*—The United States consul, under date of September 12, 1889, forwards the following translation of a circular issued by the Government to all the officers and functionaries of the port and maritime sanitary board:

By order of the ministry of commerce, * * * the officers and functionaries of the port and maritime board dependent are charged to exercise a special occular surveillance as to the sanitary treatment of vessels arriving from Egyptian ports on the Red and Mediterranean seas, upon the state of health of Bosnian and Herzegovinian pilgrims returning from Mecca, to find out, in a reliable manner, if these and their effects have undergone a quarantine treatment, and if in the affirmative, where, and for what period of time.

If there should be cause for suspicion with regard to the state of health of these pilgrims who are returning to their homes, it will be necessary to adopt immediately opportune measures of precaution, communicating with the maritime government, and, when necessary, also by means of the telegraph.

Trieste, September 9, 1889.

For the President:

TOMASSIEL.

BRAZIL—*Maceio.*—Seventy-five deaths were registered during the month of August, 1889, in a population of 17,000, including 41 from small-pox.

CUBA—*Havana.*—Seven deaths from yellow fever were registered during the week ended October 3, 1889.

Cardenas.—October 11, 1889. Good health in town and bay. Rainy weather, gradually changing to cooler nights and mornings.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Paris	Sept. 28	2,260,945	948	.....	.....	4	.....	18	4	25	8	8
Glasgow	Sept. 28	545,678	210	.....	.....	.....	.....	6	1	1	.....	.....
Amsterdam	Sept. 28	399,424	124	.....	.....	.....	.....	.....	.....	4	.....	.....
Copenhagen	Sept. 21	307,000	120	.....	.....	.....	.....	.....	2	8	.....	.....
Munich	Aug. 31	281,000	198	.....	.....	.....	.....	.....	3	2	.....	.....
Munich	Sept. 7	281,000	154	.....	.....	.....	.....	.....	2	2	.....	.....
Munich	Sept. 14	281,000	194	.....	.....	.....	1	.....	1	5	.....	.....
Palermo	Sept. 28	250,000	69	.....	.....	.....	.....	.....	.....	2	.....	.....
Rotterdam	Sept. 28	197,724	71	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stuttgart	Sept. 28	125,510	35	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pernambuco	Sept. 10	120,000	82	.....	.....	.....	.....	.....	1	.....	.....	.....
Havre	Sept. 14	112,074	60	.....	.....	.....	.....	2	.....	.....	.....	.....
Havre	Sept. 28	112,074	48	.....	.....	.....	.....	1	1	2	1	.....
Catania	Sept. 29	108,000	50	.....	.....	.....	.....	2	.....	2	.....	1
Rheims	Sept. 28	97,903	42	.....	.....	.....	.....	5	.....	.....	.....	.....
Mayence	Sept. 21	65,802	34	.....	.....	.....	.....	.....	1	4	.....	.....
Vera Cruz	Oct. 3	23,800	27	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Sept. 22	23,631	15	.....	.....	1	.....	1	.....	1	.....	.....
Kingston, Can	Sept. 27	20,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Oct. 12	20,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Sept. 21	7,428	4	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 43. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., October 25, 1889.

***Abstract of Domestic and Foreign Sanitary Reports received during the week ended October* 25, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.**

UNITED STATES.

Special Reports.

FLORIDA—*Key West.*—The State health officer publishes the following:

KEY WEST, *October* 11, 1889.

TO THE PUBLIC.

The occurrence of four sporadic cases of yellow fever in Key West, within a period of one month, and in different portions of the city, one of which cases is still sick, warrants the assumption of belief of the possibility of the presence of infection, from whatever source introduced, still remaining. Therefore, in accordance with the provisions of Paragraph IX of the act creating a State board of health, the following regulations are announced and will be enforced:

"1. Communication by unauthorized persons with the Methodist parsonage of the First Methodist Church, in Key West, is forbidden.

"2. The occupants of said parsonage are forbidden to appear upon the streets of the city, and any person is forbidden to take any article of bedding or wearing apparel from said premises.

"3. A detail from the police of the city has been instructed to watch the above-named premises, for the purpose of preventing the unacclimated from entering the same, and promiscuous visiting by all others.

"The physician in attendance, the spiritual adviser, and the necessary acclimated nurses will not be denied admittance.

SHIPPING.

"1. Masters of steam and other vessels are forbidden to take on board and carry to the main-land of Florida, or to any settlement on any of the keys of Florida, as passenger or passengers, or in any other manner, any person who can not produce a certificate of acclimation (or permit) from the State health officer of Florida; and agents of steam or other lines of vessels are forbidden to sell tickets to any one not holding the above-named certificate."

The weather is now cool, and the lateness of the season, with the probability of the near occurrence of strong and cold north winds, in-

creases the hope, devoutly to be wished for, that this fever, seemingly sporadic in character, may cease at the termination of the present case. At present there is no indication of an epidemic ensuing, and no reason why, under needful and proper restrictions, the traffic, travel, and business interests of the place should be materially damaged.

JOSEPH Y. PORTER, M. D.,
State Health Officer.

MINNESOTA.—*Minneapolis.*—Month of September, 1889. Population, 180,000. Total deaths, 183, including enteric fever, 15; diphtheria, 11; and scarlet fever, 1.

MASSACHUSETTS—*Chelsea.*—Two cases of small-pox are reported.

Reports of States, and Yearly and Monthly Reports of Cities.

CALIFORNIA—Month of September, 1889. Reports to the State board of health, Sacramento, from 106 localities throughout the State, with an estimated population of 799,500, show a total of 876 deaths, including whooping-cough, 1; diphtheria and croup, 31; scarlet fever, 3; and enteric fever, 27.

The monthly circular of the State board of health, says:

Reports received from 128 localities throughout the State continue to indicate an exceptionally favorable condition of the public health, many of our correspondents reporting no sickness whatever in their localities. Dr. H. L. Nichols, the efficient health officer of Sacramento, remarks "that the death rate for September in Sacramento was lower than for many years, and if we exclude the accidental and violent deaths, it is wonderfully low. There were but 2 deaths from zymotic causes, as against 9 in September, 1888." Among the reports of health officers in other parts of the State we find many expressing surprise at the immunity from sickness, which, as a rule, is generally prevalent at this season of the year. A great deal of it may be ascribed to their diligence in having their towns made clean, and no breeding-places for disease allowed to exist without abatement.

San Francisco.—Month of September, 1889. Population, 330,000. Total deaths, 453, including diphtheria, 11; scarlet fever, 2; enteric fever, 11; and leprosy, 1.

CONNECTICUT.—Month of September, 1889. Reports to the State board of health, New Haven, from 167 towns, having an aggregate population of 757,822, give a total of 1,040 deaths, including scarlet fever, 3; diphtheria and croup, 54; and enteric fever, 44. The monthly Bulletin says:

The following diseases were more fatal in September than in August: Diphtheria, malarial fevers, puerperal fever, pneumonia, and bronchitis.

The following diseases were less fatal in September than in August: Scarlet fever, cerebro-spinal fever, whooping-cough, typhoid fever, diarrhœas, consumption. There were no deaths in the State from

small-pox or measles—only 3 from scarlet fever, and 3 from whooping-cough.

The difference in the mortality in September and August was 150. The difference in the mortality in September and August from diarrhœal diseases was 152. There are no very considerable differences in the number of deaths from other diseases, hence the general health of the State is practically the same as in August, excepting the diminished sickness and death from intestinal disorders.

New Haven.—Month of September, 1889. Population, 85,000. Total deaths, 120, including enteric fever, 2; and diphtheria and croup, 8.

GEORGIA.—*Savannah.*—Month of September, 1889. Population, 57,000. Total deaths, 94, including diphtheria, 1.

KENTUCKY.—*Louisville.*—Month of September, 1889. Population, 227,000. Total deaths, 220, including diphtheria, 4; enteric fever, 11; and whooping-cough, 1.

MICHIGAN.—Week ending October 12, 1889. Reports to the State board of health, Lansing, from 56 observers, indicate that measles, inflammation of bowels, inflammation of brain, membranous croup, pneumonia, scarlet fever, diphtheria, puerperal fever, and influenza increased, and cholera-infantum, cerebro-spinal meningitis, dysentery, cholera-morbus, diarrhœa, inflammation of kidneys, tonsillitis, and typho-malarial fever decreased, in area of prevalence.

Diphtheria was reported present during the week at 21 places; scarlet fever at 25 places; enteric fever at 50 places; and measles at 4 places.

Detroit.—Month of September, 1889. Population, 250,000. Total deaths, 303, including diphtheria, 19; enteric fever, 6; whooping-cough, 4; and scarlet fever, 1.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Variolold.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Oct. 19	1,585,669	641	.....	.....	.....	.....	.....	.....	12	3	24	1	5
Brooklyn, N. Y.	Oct. 19	843,602	294	.....	.....	.....	.....	.....	.....	5	2	17	.....	2
Baltimore, Md	Oct. 19	500,343	165	.....	.....	.....	.....	.....	.....	6	.....	6	.....	1
St. Louis, Mo	Oct. 19	450,000	164	.....	.....	.....	.....	.....	.....	4	4	12	.....	.....
Boston, Mass	Oct. 19	420,000	175	.....	.....	.....	.....	.....	.....	6	.....	10	.....	2
Cincinnati, Ohio	Oct. 19	325,000	102	.....	.....	.....	.....	.....	.....	1	.....	6	.....	1
New Orleans, La	Oct. 12	254,000	105	.....	.....	.....	.....	.....	.....	1	.....	3	.....	.....
Detroit, Mich.	Oct. 12	250,000	59	.....	.....	.....	.....	.....	.....	2	.....	4	.....	.....
Cleveland, Ohio	Sept. 21	235,000	80	.....	.....	.....	.....	.....	.....	5	.....	2	1	.....
Cleveland, Ohio	Sept. 28	235,000	96	.....	.....	.....	.....	.....	.....	8	.....	7	.....	.....
Pittsburgh, Pa	Oct. 19	230,000	86	.....	.....	.....	.....	.....	.....	13	2	13	.....	.....
Louisville, Ky	Oct. 12	227,000	57	.....	.....	.....	.....	.....	.....	7	.....	.....	.....	.....
Minneapolis, Minn.	Oct. 12	200,000	46	.....	.....	.....	.....	.....	.....	4	2	4	.....	.....
Minneapolis, Minn.	Oct. 19	200,000	44	.....	.....	.....	.....	.....	.....	6	1	7	.....	.....
Providence, R. I.	Oct. 19	127,000	47	.....	.....	.....	.....	.....	.....	2	.....	4	.....	1
Denver, Colo	Oct. 18	125,000	52	.....	.....	.....	.....	.....	.....	15	.....	1	.....	.....
Indianapolis, Ind	Oct. 18	124,450	32	.....	.....	.....	.....	.....	.....	3	.....	2	.....	.....
Richmond, Va	Oct. 12	100,000	41	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Richmond, Va	Oct. 19	100,000	36	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	1
Toledo, Ohio	Oct. 18	89,000	29	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Fall River, Mass	Oct. 19	69,000	25	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Nashville, Tenn	Oct. 19	65,153	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	Oct. 19	60,145	48	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	Oct. 19	53,000	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Oct. 19	42,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Oct. 4	40,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	Oct. 16	32,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Oct. 19	30,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yonkers, N. Y.	Oct. 18	30,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Oct. 19	26,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Oct. 19	25,000	11	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....
Newport, R. I.	Oct. 17	22,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	Oct. 20	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill	Oct. 13	16,000	4	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Pensacola, Fla	Oct. 12	15,000	4	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Pensacola, Fla	Oct. 19	15,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended October 5 corresponded to an annual rate of 17.6 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Leicester, viz, 10.7, and the highest in Manchester, viz, 25.8 a thousand. Diphtheria caused 7 deaths in Manchester, 5 in Salford, and 2 in Liverpool.

London.—One thousand three hundred and eighty-one deaths were registered during the week, including measles, 9; scarlet fever, 20; diphtheria, 45; whooping-cough, 14; enteric fever, 19; diarrhœa and dysentery, 52, and cholera nostros, 1. The deaths from all causes corresponded to an annual rate of 16.6 a thousand. Diseases of the respiratory organs caused 225 deaths. In greater London 1,739 deaths were registered, corresponding to an annual rate of 16.1 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 18; scarlet-fever, 5, and diphtheria, 7.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended October 5, in the 16 principal town districts of Ireland, was 22.4 a thousand of the population. The lowest rate was recorded in Drogheda, viz, 0.0, and the highest in Londonderry, viz, 41.0 a thousand. In Dublin 177 deaths were registered, including measles, 1; enteric fever, 7; whooping-cough, 3; diarrhœa, 10, and dysentery, 2.

Scotland.—The deaths registered in 8 principal towns during the week ended October 5 corresponded to an annual rate of 18.6 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Paisley, viz, 11.6, and the highest in Perth, viz, 22.2 a thousand. The aggregate number of deaths registered from all causes was 476, including measles, 8; scarlet fever, 6; diphtheria, 13; whooping-cough, 15; fever, 11, and diarrhœa, 16.

FRANCE—*Marseilles.*—Seven hundred and eighty-seven deaths were registered during the month of September, 1889, including small-pox, 23; enteric fever, 42; diphtheria and croup, 17; measles, 9; whooping-cough, 4, and diarrhœa and enteritis, 120.

DUTCH GUIANA—*Paramaribo.*—Ninety-three deaths were registered during the month of August, 1889, including typhus fever, 1, and malignant fever, 2.

DEMERARA—*Georgetown.*—One hundred and eighty-three deaths were registered during the month of August, 1889. None from contagious diseases. Population, 56,000. The prevailing diseases were malarial fevers, diseases of the bowels and kidneys, and phthisis.

BRAZIL—*Bahia.*—The United States consul, in his dispatch dated September 4, 1889, says:

Since my dispatch, No. 37, of July 25, concerning the sanitary condition of the city, I have the honor to say that no change worth noting occurred until about ten days since, when several cases of smallpox were reported in the lower part of the city. The authorities have taken means to prevent its spread, and removed to the hospital cases whenever found, so that now there are nearly 100 in the hospital affected by it. The authorities say it is not epidemic, and no apprehension need be felt as to its increasing. The rainy season seems suddenly to have come to an end on or about the 25th ultimo. There has been no rain since, and it is becoming very warm and dry.

AFRICA—*Leprosy in Cape Colony.*—The United States Consul, in his dispatch of August 28, 1889, furnishes the following report upon the prevalence of leprosy at Cape Colony:

Since the death by leprosy of Father Damien at the leper station in the Sandwich Islands, a renewed interest is manifested in the measures to be undertaken to prevent the spread of this loathsome disease, and to care for the unfortunate beings already stricken with the malady for which it appears medical science has discovered no remedy.

In point of fact it appears that some members of the profession still deny that the disease is contagious, or at least declare it not proven, just as some combat the practice of vaccination. The nature of the disease is, however, so terrible that once public alarm is aroused no half measures will be tolerated.

It is difficult to reconcile oneself to the fact that in this colony public efforts to restrict and extirpate this disease have, in fact, retrograded instead of advanced.

Ancient history points to the only method of dealing with this scourge, and shows how stringent was the law of segregation in its application to leprosy, a law as necessary now as ever it was, and the only method of arresting and confining the disease.

It is interesting to note how indifferent people become to any disease that has become common among them, especially in the case of those where death does not quickly follow the attack, and the sufferer lingers and death approaches gradually. Leprosy has probably existed in Cape Colony from near the time of its early settlement, and as a rule been confined to the lower classes, who are huddled together in close quarters, without sanitary safeguards, and peculiarly liable to the contagion by reason of their environment. About 20 per cent. of the cases are white.

Recent inquiries made by a select committee of the colonial council have brought to light such a condition of affairs in relation to this matter that the facts would hardly be credited had they emanated from any less reliable source.

That leprosy existed in the colony was well known, but that persons afflicted with this malady were allowed to engage in the ordinary business and traffic of life was hardly to be supposed. Yet legislative inquiry has established the fact that there are more than 600 lepers in the colony, and as the evidence shows, some are engaged in the handling of articles of food whereby the contagion may be brought to the doors of those whose habit of life would seem to warrant exemption from infection. In one house was found butter-making carried on by lepers, there being three so afflicted.

One medical witness testifies as follows:

"I know a house where the business of a green-grocer is carried on. There are two lepers residing there, and you will find the lepers, the vegetables, and the family occupying the same room. I have seen lepers making butter for sale. In one small room there stood the pans of milk, and there was a woman with leprosy kneading butter with her hands." It was also shown that lepers are engaged in carrying on the business of fish-curing, fish-mongering, and wood-cart driving, by reason of which the public is exposed to great danger.

The chief witness, who has had an experience of fifty years in the colony and has made a special study of this disease, is of the decided impression that leprosy is spreading, and that it is contagious; but that it can be cured. His opinion is in effect that the disease is caused by a specious of bacillus which gains lodgment in the system in persons whose vitality is low. It is said that a leprous cook at the leper station accidentally killed the bacilli by boiling his fingers off, thus arresting the disease.

When the effect of heredity in spreading the disease is considered, the fact that these leprous subjects are allowed to cohabit and rear children subject to all the revolting conditions which will naturally occur to the reflective mind, the position of the colony in this regard is not to be praised. At Robben Island, 7 miles from town, is situated the asylum for the insane, and the leper station, where only about 100 of the afflicted are gathered. But the management is so lax that it is reported that even sexual intercourse is not unknown among the inmates.

An effort is now being made to remove the insane to a more favorable site, and to segregate the lepers on the island under proper restrictions. It is to be hoped that this investigation, which has brought to light the grave dangers to which the public are exposed, will result in such remedial measures as the people have a right to expect, and that the lively interest now aroused will not be allowed to slumber until the isolation of every person in whom the taint of leprosy can be traced, is effected.

CUBA—*Havana.*—For the week ended October 11, 1889, there were 7 deaths from yellow fever.

Santiago de Cuba.—The United States consul furnishes the following report for the second half of September, 1889:

The heavy rains, moist atmosphere, and high winds have increased the mortality of children, especially of the negro race, and have also caused lung diseases to claim a considerable share of the 51 deaths in the district of this city. Yellow fever is entirely confined to the military hospital outside of the city limits. There has been very little

shipping, this being the dull season, and the health of the port is excellent.

Cause of death.	Whites.	Negroes.	Troops at military hospital.	Total.
Yellow fever			11	11
Pernicious fever	4	2	1	7
Remittent fever	3			3
Diphtheria	1	1		2
Croup		1		1

BAHAMAS—*Nassau, N. P.*—October 12, 1889. City healthy. Weather hot and rainy.

CANADA—*Pelee Island.*—Reports having been received that an epidemic of small-pox was prevailing at Pelee Island, Lake Erie, the secretary of the State board of health of Ohio sent the following telegram, in reply to one from this bureau:

COLUMBUS, OHIO, *October* 18, 1889.

Dispatches from Dr. Bryce, Toronto, report but 1 case on island. This was imported. Quarantine at Sandusky removed.

C. O. PROBST.

PERSIA—*Cholera.*—

LEGATION OF THE UNITED STATES,
Teheran, September 4, 1889.

SIR: I have the honor to report that having been consulted by the acting prime minister, His Excellency Emin-el Mulk, as to the most effectual measures to be adopted for preventing the extension of the cholera to the interior, I recommended that the native and foreign physicians in Teheran be summoned to meet in sanitary council; that all information received by the Persian Government concerning the appearance of the scourge and its progress be communicated to the said council; and that it be requested to at once formulate a plan to serve as a guide to the Government in combating the epidemic's further encroachments. Acting upon this suggestion, the council in question was called to assemble yesterday, the 3d instant. The United States legation was represented on the occasion by W. W. Torrence, M. D., a copy of whose report of the proceedings I beg respectfully to submit inclosed for your consideration.

I have the honor, etc.

E. SPENCER PRATT.

Hon. JAMES G. BLAINE,
Secretary of State, Washington, D. C.

[Inclosure 1 in dispatch.]

TEHERAN, *September* 4, 1889.

SIR: I have the honor to report to you that at the meeting of the sanitary council convened at Teheran on the 3d instant, and composed of the six European and American physicians resident here and various Persian physicians, it was recommended, after considering the information furnished by the Persian Government, of which I submit the inclosed *résumé*, that severe quarantine be maintained at Ahvas for

fifteen days, and on the frontier also; five days' quarantine at Kennanshah; fifteen days at Bushire for arrivals by sea from infected ports, and fifteen days for arrivals by land from between Mohammerah and Shaster; ten days' quarantine at Khănăkin, and that a sanitary cordon be established between Inendeli and Khănăkin and vicinity, along the Persian frontier, to prevent as far as possible the extension of the epidemic by means of pilgrims now returning from the shrines at Kebellah and Nedjif.

A weekly meeting of the sanitary council is to be held, and everything possible is being done, it appears, by this Government to protect the interior against an invasion of the pestilence.

I am, etc.,

W. W. TORRENCE.

Hon. E. SPENCER PRATT,
United States Minister, etc.

[Inclosure 2.]

Résumé of information relating to the cholera, furnished by the Persian Government to the sanitary council convened at Teheran on the 3d September, 1889.

Cholera first made its appearance this year at Schătră, Nasirijeh, and one or two other places on the 12th of Zohădjéh 106 A. H., corresponding to July 10, 1889, A. D., also at Sakih Sheikh, on Turkish territory, about the same time. Instructions were at once given by the post-office authorities to disinfect all mail matter, and the transmission of leathern or woolen articles was prohibited. On the 26th of Zohădjéh (24th July) the scourge was reported at other places, and at Bushire a week earlier (July 17). Mirza Abdul Rizah, health officer on the part of the Persian Government, reported cholera as present at Bushire, where the said Government had established a strict quarantine for all vessels coming into port, at Kharaji, an island some 12 or 15 miles from Bushire. Eight deaths in all occurred at Bushire up to August 23, since which time no cases of cholera have been reported at Bushire or its vicinity; in fact it is reported by Drs. Mullen and Ross, English physicians at Bushire, that cholera does not now exist there, thanks to a strict quarantine. Of the 8 deaths occurring at Bushire, 6 had occurred before quarantine had been established, and these among passengers arriving on steamers who had been allowed to land before cholera was suspected. A report from Khănăkin, in Turkish territory, where quarantine was soon established, under date of September 1, says that cholera rages at Bagdad, 600 persons having died in one quarter of the city, and that the newest quarter. Latest telegraphic advices from Bushire read as follows:

"Cholera does not exist here or in vicinity. Strict quarantine maintained. Cholera milder at Bassorah. Increase at Ahvaz, Bagdad, and Mohammerah, 150 deaths daily at Bagdad, 30 daily at Mohammerah.

CONSULATE OF THE UNITED STATES,
Bagdad, August 22, 1889.

SIR: I beg leave to state that a fatal malady, described by the sanitary department as "pernicious malaria," now officially reported as

"cholera," originated among the Arabs, who live in the marshes of southern Mesopotamia, and drink the water flowing throngh the marshes or standing in stagnant pools. The swamps and marshy lakes of lower Mesopotamia cover a vast area of land lying below the level of the river beds, and were originally caused by the neglect and consequent breaking down of the embankments of the ancient system of irrigating canals, and the annual inundation of the two great rivers.

This year neither the Tigris nor the Euphrates have risen to their average height, in consequence of which many of the marshes, but partly filled by the spring floods, are now rapidly drying up.

A thick blue mist hangs like a heavy cloud every morning over these drying marshes, while the Arabs who live near them and drink the putrefying water were the first victims to the disease.

The disease was first diagnosed and reported on the 26th of July by a qualified medical officer of the Government at Shatra, a Government and military station situated on the right bank of the Shat-el-Hai, a large stream flowing in a southerly direction from the Tigris into the Euphrates near Nasruji. From Shatra the disease followed the line of marshes bordering the Shat-el-Hai to Nasruji, a Government and military station situated on the left bank of the Euphrates some 25 miles south of Shatra. The marshes bordering the Euphrates on its right bank conveyed the disease from Nasruji to Bassorah, where it was next reported on the 6th of August. On the 12th instant Souk-el-Shiouk, and the following day Konna and Fammar, were visited by the cholera. Although the Government acted with promptness, energy, and keen vigilance, imposing strict quarantine measures, both by river and by land, at a safe distance from Bagdad, the dreaded disease in its rapid progress made its appearance in this city on the 16th ultimo, when 4 deaths from cholera were officially reported. Since that time the number of daily deaths has rapidly increased, 59 being reported on the 21st ultimo.

Unlike the plague which visited this city in 1876, the cholera has so far been confined to the cleanest quarter of the city, while among the first victims were members of the best families, whose sanitary and physical conditions were regarded as perfect. Sanitation and good living insures no one, rich or poor, against the disease this time, and for that reason the poor are possessed of a double fright.

On Sunday, the 18th ultimo, one of the Sisters of Charity, a French woman, died after a few hours' illness. The sad news flew from mouth to mouth, and before nightfall several hundred Jewish and Christian families hastily gathered together a few necessary things and fled with hurrying feet from the city of death. Terror reigned in every heart, a panic prevailed, and on the following day, the 19th ultimo, nine-tenths, it is said, of all the shops, bazars, and offices throughout the city were closed. It was with difficulty that the barest necessities of life could be obtained. Many thousands, of all religions, deserted their homes for the burning deserts. For many miles, both above and below the city, the banks of the Tigris are lined with tents and booths, which the Jews still call "tabernacles," while multitudes have sought refuge in the more distant villages, or hidden themselves in the solitudes of the surrounding desert, if haply they may escape the scourge. At the present moment almost the entire Christian and Jewish population, and many of the wealthier Mohammedans, live outside the city limits.

Though quite unable to gather statistics, I judge half the people have

temporarily abandoned their homes until the fury of the disease is spent.

The population of Bagdad is variously estimated from a minimum of 60,000 to a maximum of 200,000 people. No census has been taken for many years. It is, therefore, impossible to make an authentic statement. I adopt the views of Doctor Bouman, who ventured in his report to estimate the whole population at 180,000, of whom about one-half are Mohammedans, five-sixteenths Jews, and three-sixteenths Christians of all denominations.

I have the honor, sir, to be your most obedient servant,

JOHN HENRY HAYNES,
Consul.

Hon. WILLIAM F. WHARTON,
Assistant Secretary of State, Washington, D. C.

SANITARY WORKS AT MUNICH.

By Prof. Dr. MAX VON PETTENKOFER.

GERMANY—*Munich.*—The United States consul, in his dispatch to the Department of State, under date of September 28, 1889, says:

I have received frequent inquiries from the United States concerning the healthfulness and sanitary condition of Munich, from persons who wished to send some member or members of their families here for the advantages offered for study in music and painting, and I have from time to time answered their inquiries. I had gathered more or less data from which I had partly prepared a report upon the subject for the Department of State, when a series of communications, written by Prof. Dr. Max von Pettenkofer, appeared in the newspapers here, which treated the same subject. I concluded to send, instead of the report I had partly prepared, a translation of Dr. von Pettenkofer's article, as he had covered the ground very fully, and in addition his communication was very interesting to sanitary engineers and health officers.

I have the honor to send herewith the article of Dr. Max von Pettenkofer freely translated by me, hoping it will be found interesting and useful.

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A bad reputation sticks to places as well as to people, and is frequently reiterated long after the man has repented and the locality has been freed from the cause of its unsavory reputation. The society for ticket-of-leave-men has less trouble and more praise in providing situations for their wards than the board of health of a city has in restoring its good reputation for health once it has been lost. Munich is in this unfortunate condition.

If typhoid fever makes its appearance anywhere, at once attention is directed to Munich as a much worse hot-bed for the disease, although, for some years past, there has been less typhoid fever in this city than in the majority of the large cities of Europe. Lately this disease broke out in Vienna, and the *Neue Wiener Abendblatt*, of December 20, 1888, says: "In Munich, a city which has a bad reputation because of the frequent and severe outbreaks of typhoid fever there, etc." It seems to be an opportune time to give the facts concerning typhoid fever in Munich; and I am glad of the opportunity offered me through the columns of the *Münchener Neueste Nachrichten* to enter into the details; and, as I

have lately written a paper upon this same subject, which seems to have escaped the notice of the *Wiener Abendblatt* and the Vienna physicians, I am well prepared to do so.

I will discuss the movement of typhoid fever in Munich from 1851 to 1887, thirty-seven years, in order that I may embrace a fairly long period of time, and will use the official police reports of deaths from typhoid fever, An objection may be urged at the outset that the fatal cases of typhoid fever do not present an accurate picture of the amount of sickness due to this disease, partly because this epidemic is at times very different in character and intensity, sometimes more other times less of the afflicted die; partly because the diagnosis of different physicians is not always correct, and also partly because the disease is more skillfully treated now than formerly, and therefore fewer persons die. The thorough investigations of Dr. von Ziemsen and Dr. Port fully dispose of this first objection. Dr. Ziemsen made statistics of all cases of typhoid fever treated in the hospitals for twenty years, and compared the number of cases thus treated with the number of fatal cases in the city. He made a chart or diagram of both series of numbers so that one can easily see that up to the present time, as the cases treated in the hospitals vary in number, so likewise varies the number of fatal cases reported from private houses, and that therefore the hospitals are a correct index of the prevalence of typhoid fever in the city. Dr. Port has obtained the same result, confining his observations to the Munich garrisons; though forming only a part of the population, between five and six thousand men, yet large enough to allow conclusions to be deduced therefrom. Dr. Port was able also to follow closely the varying treatment and conditions that obtained in the various barracks.

As to the second point: The uncertainty of the diagnosis of some physicians. Some years ago I examined it carefully and found it of no importance. I collected the fatal cases of typhoid fever reported by all the physicians to the police authorities from 1851 to 1867 and calculated the monthly average. Professor von Buhl, director of the Pathological Institute, also calculated the monthly average of typhoid mortality in the general hospital from 1856 to 1864, having first, as I did, gathered the reported deaths together by months. In von Buhl's table there is no case of mistaken diagnosis, as only those cases have been counted in which the presence of typhoid fever had been verified by a *post-mortem*, whereas in my tables here and there an error was probable, for the returns for the city were furnished by physicians, who diagnosed the cases as typhoid fever, without, as a rule, having held a *post-mortem* examination. But the numbers in the city being much larger, we may conclude that the sporadic errors are equalized, as probably some doctors diagnosed the cases as typhoid fever too often and others not often enough. This is the result of the law of large numbers, as has been clearly explained by Dr. von Mayr, subsequently imperial under secretary for Alsace-Lorraine. However, the comparison of the monthly average at the hospital, where the figures are correct, with the monthly average of the whole city, which includes the cases of mistaken diagnosis, shows that the Munich physicians in the main have diagnosed correctly.

MONTHLY AVERAGE OF DEATHS FROM TYPHOID FEVER.

1. *In the general hospital.*—January, 13.1; February, 14.1; March, 12; April, 6.9; May, 5.2; June, 5.2; July, 6; August, 4.8; September, 6.8; October, 4.2; November, 7.6; December, 12.2.

2. *In the whole city.*—January, 33.5; February, 36.8; March, 31.8; April, 23.1; May, 17.6; June, 15.2; July, 15.8; August, 16.7; September, 16.1; October, 15; November, 19; December, 28.5.

One sees immediately that typhoid fever varies in different seasons very much, but also that the movement is the same in the hospital and in the city; in both the maximum is found in February, the minimum in October. This correspondence will be found still more striking and surprising if from the death-rate of the whole city we calculate the death-rate of the hospital, and compare the numbers so obtained with the facts. A ratio between the city and hospital is necessary, and we will use the ratio for the month of February, the worst typhoid month of the year. The average number of *post-mortem* examinations, declared to be typhoid fever, in the hospital, for the month of February, is 14.1; the city reports 36.8 deaths from the same cause; that is 2.61 times more deaths from typhoid fever in the city than in the hospital. If we calculate the monthly mortality in the hospital by dividing the figures given above as the monthly mortality of the city with this divisor, 2.61, we will at once discover if we are dealing with an accident or a law. If it is all an accident, the result for February, which furnished the ratio or divisor 2.61, will be right, but for the other eleven months the results would most likely be far from the observed facts and figures. Making the calculation thus, we find the monthly mortality in the hospital as now given in the figures below:

January, 12.8; February, 14.1; March, 12.2; April, 8.8; May, 6.7; June, 5.8; July, 6; August, 6.4; September, 6.2; October, 5.7; November, 7.3; December, 10.

The correspondence of the figures thus calculated with the observed facts is quite unexpected, especially in the months of most typhoid fever. That the correspondence is less marked in the months of least typhoid fever is no surprise to a statistician, as accident is much more telling upon small numbers than on large ones. I am, therefore, entirely satisfied that the mistaken diagnosis of a physician here and there exerts no appreciable influence upon the figures that show the condition of typhoid fever in Munich. Finally, the change in the manner of treating typhoid fever can not greatly alter the general result which shows the aspect of mortality from typhoid fever in Munich. In the treatment of this disease improvement has been made, and it would be unjust and ungrateful not to acknowledge it. This can be examined more satisfactorily in a large garrison and in the military hospitals. But Port comes to the following conclusion in his classified examinations concerning the movement of typhoid fever in the Munich garrisons:

"Typhoid fever, in common with other infectious diseases, has this peculiarity, that the epidemic displays the most varying degrees of intensity or severity. Statistical experience contradicts the assertion that by proper treatment it is possible, under all circumstances, to reduce the fatality from typhoid fever to a certain minimum percentage. Statistics prove that in a severe epidemic of typhoid fever it is just as praiseworthy not to lose more than 20 or even 28 per cent. of cases, as in a mild one to lose no more than 2 per cent. The causes upon which the severity of the epidemic depends will be discussed later; here I only wish to emphasize the fact that from the death-rate of typhoid fever in a city a substantially correct picture can be obtained of the movement of typhoid fever."

In the following table I will show the yearly movement of typhoid fever in Munich from 1851 to 1887, both inclusive:

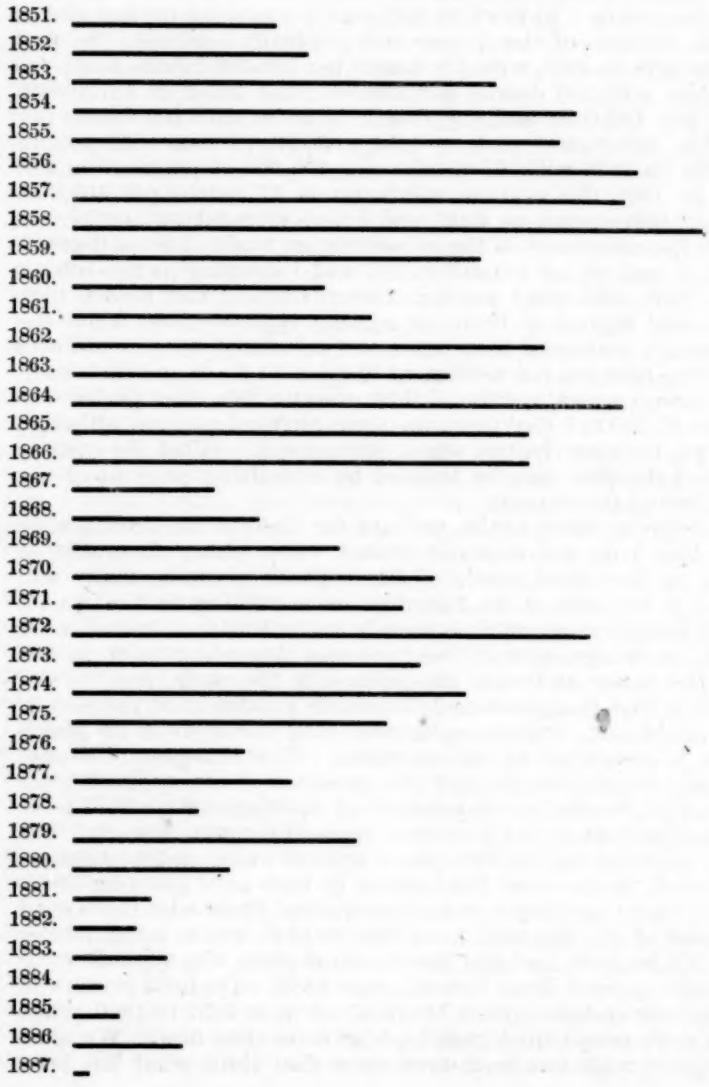
TABLE A.

Year.	Population.*	Deaths from typhoid fever.		Remarks.
		Annual.	Per 100,000 of population.	
1851	123,967	123	99	
1852	125,588	152	121	
1853	127,219	235	184	
1854	128,850	293	227	Cholera year.
1855	130,481	253	193	
1856	132,112	384	291	
1857	133,847	390	291	
1858	135,733	453	334	
1859	137,005	240	175	
1860	140,624	153	109	Cess-pools made water-tight.
1861	144,334	172	119	
1862	148,200	300	202	
1863	154,602	252	163	
1864	160,828	397	247	
1865	167,054	338	202	Opening of Pettenkofer's water-works.
1866	168,265	342	303	
1867	169,476	88	52	
1868	170,688	136	80	
1869	170,000	190	111	
1870	170,000	254	149	
1871	170,000	220	129	
1872	169,693	407	240	
1873	175,500	230	131	Cholera year.
1874	181,300	289	159	Do.
1875	187,200	227	121	
1876	193,024	130	67	
1877	205,000	173	84	Sendling, a suburb, included in the city (annexed); cattle market and abattoir opened.
1878	211,300	116	55	
1879	217,400	236	109	
1880	223,700	260	72	
1881	230,028	41	18	
1882	236,400	42	18	
1883	242,300	45	19	Opening of the highland water-supply.
1884	249,200	34	14	
1885	255,600	45	18	
1886	262,000	55	21	
1887	268,400	28	10	

* At the beginning of the year.

Persons accustomed to study statistical figures will be surprised at the decrease in the frequency of typhoid fever in Munich. From 1851 to 1860 there were years when about twenty-eight times more people died than in some of the years between 1879 and 1888, although more people had immigrated into the "plague-cursed city," and its population was doubled. The periodical movement of typhoid fever will be made thoroughly intelligible to every one, professional and layman, by the following diagram, in which the length of the separate lines correspond with the number of deaths from typhoid fever in the several years:

TABLE B.



At a glance we see how typhoid fever during this period increased and decreased, and that the increase was gradual, the decrease more sudden. This has always been the case with this disease, even prior to 1851. According to the reports of Dr. Frank Seitz, the disease reached the greatest malignity relatively in 1840, when, out of a population of nearly 100,000, from January, 1840, till March, 1841, 511 died from this cause. In the foregoing diagram four periods may be distinguished: The first from 1851 to 1860, the second from 1860 to 1867, the third from 1867 to 1876, and the fourth from 1876 to the present time. The past year, 1888, being fully as satisfactory as the preceding year, not more than 10 deaths per 100,000 of the population. The first period embraces ten years, the second seven years, the third nine years, and the fourth ten years. In the four different periods the highest points marking the ravages of the disease are gradually lessened; the first period culminates in 1858, with 334 deaths per 100,000 inhabitants; the second in 1864, with 247 deaths per 100,000; the third in 1872, with 240 deaths per 100,000; and the fourth in 1879, with 109 deaths per 100,000. The minimums were in 1851 with 99, in 1860 with 109, in 1867 with 88, in 1876 with 67 deaths per 100,000 of population, and from 1881 to 1888 the average minimum is 17 deaths per 100,000. These periods correspond, as Buhl and I demonstrated on another occasion, with the movement of the subsoil water, typhoid fever decreasing with high and rising subsoil water, and increasing as the subsoil water fell. Our celebrated mathematician, Ludwig von Seidel, took the reports and figures of Buhl concerning typhoid fever when the observations only embraced nine years, and calculated the probabilities of a connection between the movement of typhoid fever and the condition of the subsoil water, and found that, even for this short period, the chances were 36,000 to 1 that there was some physical relation, although still unknown, between the two sets of phenomena. What the chances of 36,000 to 1 signifies may be learned by consulting page 54 of my book hereinbefore mentioned.

Here I desire to state again, perhaps for the one hundredth time in my life, that I do not consider subsoil water either favorable or unfavorable to the development of the typhoid germ, as many still believe, but I consider it as harmless as any thing in the world, and that the subsoil water work is merely an indication to me of other things, such as dampness and the processes dependent on it in the soil above the water and near the surface of the earth, and, in my opinion, when this dampness and favorable condition of the soil is present, typhoid and cholera epidemics may occur even in places where there is absolutely no subsoil water. That this ground or subsoil water and its oscillations and the presence of the typhoid germ are not potent of themselves to produce an epidemic of typhoid fever is most clearly proved by the history of typhoid fever in Munich. The coincidence between the oscillations of subsoil water and of typhoid fever in Munich, in the sense Buhl meant it, lasts until the year 1880, but not since then; and there is no explanation there why the second typhoid period of the diagram, from 1860 to 1867, was so much milder than from 1851 to 1860, and still less does it explain why typhoid fever has almost disappeared from Munich since 1880. Typhoid germs and subsoil water movements exist in Munich now as in 1851 to 1860, when many times more people died from typhoid fever than now. We must therefore inquire what has been done since that time, what has been

changed that typhoid fever should steadily decrease and finally almost disappear. I can not here discuss the entire etiology of typhoid fever, that would require a large volume, but I shall touch on some of the most prominent points. The favorite and popular notion is that typhoid fever does not proceed from a locality, but from those affected by the disease; that the specific germ, a microbe, discovered by Eberth and more closely studied by Koch and Goffky, in point of fact is but seldom transmitted from sick to healthy persons direct in such an active condition or in sufficient numbers to produce disease; sporadic cases only being due to this mode of transmission; and that the disease germ is propogated endemically in a locality, but that a disastrous outbreak, an epidemic, from such a germ, can only take place if some portion of the excrement of a typhoid patient, be it ever so little, gets into wells or water-supply which furnishes drinking water to the people of the community. The drinking-water theory has the most followers among students of typhoid fever. Naturally so, for it is the most obvious, the simplest, the easiest understood by physicians and laymen, and it never fails; for if there is no epidemic nothing from a typhoid patient has polluted the drinking-water, but if the epidemic breaks out, well, then, *something* must have gotten into the water. The Vienna people seem to be satisfied with this explanation, and even such an eminent, meritorious, and sagacious clinical physician as Nothnagel rests content with it. Upon a careful examination of the facts the drinking-water theory turns out to be unsatisfactory, and can only be believed in if one carefully avoids a thorough examination and only takes into account a few cases that accidentally fit in with this hypothesis. In earlier days, when typhoid fever was much more prevalent in Munich, this was *often* done by physicians and laymen, and *sometimes* even nowadays.

Traveling between Nuremburg and Munich some time during the sixties, I overheard a conversation in a railroad car between a stranger and a Munich man, which was very instructive to me. The stranger visiting Munich for the first time inquired of his neighbor, who had made himself known as a Munich man, concerning the sanitary condition of the city, and if it was true that typhoid fever was so prevalent. The Munich man, beaming with health, unhesitatingly answered yes; and when asked further where it was best to lodge to avoid this disease, answered, that it made no difference, the Bavarian Hotel, Oberpollinger Hotel, or Schlicker's in the Thal, it was the same in every quarter of the city; the only sure preventive was not to drink a drop of water; that he was a Munich man who never drank a drop of water, and that one had only to look at him to see that he was all right. To be sure, there was some bad beer in Munich that might cause typhoid fever, but that he only drank Hofbranhaus and Sternecker beer. That this disease depended on beer and water could be seen from the fact that the disease was more virulent in winter, when the beer was new, than in summer, etc.

This drinking-water theory has, however, done so much for Munich that within the city limits 30,000,000 marks' (about $7,500,000) worth of beer is consumed yearly; the annual malt-tax shows this. The fact that typhoid fever is more prevalent in winter, from November to March, than in summer, from April to October, as we see from Buhl's tables, might be reconciled with the drinking-water-beer theory, for in the manufacture of beer much water is always necessary, but for the

light beer of winter more water is used than in the heavier or stronger beer of summer, hence the latter is always a little more expensive. Admitting all this, nevertheless the drinking-water theory fails to account for and explain the frequency of typhoid fever in Munich, as will be plainly seen from the history of the water supply of the city. A glance at the figures and the diagram hereinbefore given makes it impossible to believe that variations in the prevalence of typhoid thus made plain to the eye were due to variations in the water supply. Investigation shows that since the beginning of this century the water supply of the city was partly from springs on the right bank of the river Isor (Gasteig, Brunnthal, Lilienberg and Nockherberg), partly from wells on the left bank of the Isor, the water being forced by water-power furnished by the river through pipes into the houses (the largest of these wells are the Hofgarten, Jungfernthuren, Glockenbach, Katzenbach, and Sünde), and partly from wells dug in the gravel, some of which become famous for their wholesome water, particularly the one in the court-yard of the building set apart for the courts of justice.

Water was supplied by the royal water-works and also by the city board of magistrates, and they have always been rivals and in competition for business; frequently in the same street one house was supplied by one system and the next house by the other system; in the same house even families living in the different flats used water from different systems, others again used water exclusively from the sunken wells, while others used both well water and the water-works. Munich was consequently an exceptionally good place to study the effects of different kinds of drinking-water upon cholera and typhoid fever. Before I had given my attention earnestly to the study of epidemic diseases I believed in the simple theory of the drinking-water, and that in the cholera year, 1854, the different outbreaks of the disease in the different parts of the city were to be accounted for by this theory, the water used coming from different sources. I took the trouble to ascertain the sources of the water supply of the city, house by house, by inspecting the books containing the water rates paid to both the royal and the city authorities and by personal inspection, but I was greatly disappointed. I could find no relation or connection between the water and the disease, neither as to place or time. A water-main, for instance, belonging to the royal service ran through Canal, Rumford, and Miller streets to the Sendlingerthor Square, thence through Sonnen street and beyond; families living in houses on the Miller street supplied from this water-main suffered severely. But on the Sendlingerthor Square the same water suddenly became healthy; in Sonnen street it was again unhealthy but not very destructive, but became again fatal as soon as it turned from Sonnen street into Josephspital street and Herzogspital street. In Canal street, where the water enters the main, thence flowing to Miller street, the epidemic broke out two weeks later than in Miller street. Canal street then had fifty houses, and it so happened that twenty-five were supplied with water from the water-works and twenty-five used well water, but the epidemic showed the same virulence in both groups of houses and disappeared equally from both.

So the cholera raged in the different streets and quarters of Munich with widely varying intensity and at different times, but no connection between these varying phases of the disease in various quarters and the water supply can be traced, and it would have appeared necessarily in the different houses, since some were supplied from springs on

the right bank of the Isor, others from wells on the left bank of the Isor supplied through the water-works, and other houses were supplied directly from wells sunk in the gravel. It must be admitted that it would be impossible for all these different sources of water supply to be polluted at the same time by cholera excrement and to be disinfected also at the same time. There are cases where the coincidence between the water supply and the occurrence of cholera and typhoid fever is more marked, but even these cases do not stand a close investigation, as I have shown in my larger work, "The Present Aspect of the Cholera Question," pages 180 to 256, not even the celebrated case of the Broadstreet pump in Golden Square, London. It is impossible to show the appearance of a connection between drinking water and typhoid fever in Munich. Up to the year 1865 and for many years before 1854, the water supply of Munich was substantially the same that it was in the cholera year, 1854. In the year 1865 the Pettenkofer water-works were added. The pure water furnished by this system did not take the place of any water heretofore used, but was simply an addition to the supply for some quarters of the city. In the year 1883 the water supply from the springs in the high-lying Mongfall Valley was completed by the city authorities, and it was not until this year, 1883, that the old municipal water-works, *i. e.*, pumping water from wells into the mains, was abolished. Now, if we look at the diagram showing the prevalence of typhoid fever in Munich for the various years and compare it with the time of the opening of the Pettenkofer water-works and the Mongfall highlands supply. opened respectively in 1865 and 1883, we are forced to the conclusion that neither of these water supplies can have had the slightest influence. The utilization of the Pettenkofer water-works coincides with a period of severe typhoid fever prevalence, which rather increased than decreased the following year. And the sudden decrease, even to a minimum in 1867, can not be attributed to the Pettenkofer water-works, for the great majority of the inhabitants drank the old water as formerly and notwithstanding they suffered but little from typhoid fever. And, again, after this healthy year, 1867, in spite of this great addition to the pure water supply, typhoid fever steadily increased to the very considerable extent it reached in 1872. The introduction of the very excellent supply of water from the highlands in 1883 is still more unfavorable to the drinking-water theory. True it is that in 1883 only 45 out of 242,800 inhabitants, *i. e.*, 19 per 100,000, died of typhoid fever, but in the two preceding years the mortality was even somewhat less. It would have been very fortunate for the drinking-water theory if the highland water supply had been finished and put in general use by 1881, then it would have been considered a triumph of this theory and its disciples would have pointed to the diagram for a triumphant vindication of their favorite theory, and yet the decrease of typhoid fever would have had no connection with the water. Of course such coincidences occur in some places, and these only are taken into account, the great majority of cases which do not support them being ignored by the believers in the drinking-water theory. But even if by chance the water supply from the Mongfall Valley had been completed in 1876, when the marked decrease in typhoid fever began, there is one fact that clearly proves that this decrease has nothing to do with the drinking water. As before remarked, the royal and the city water service have always been competitors, and even now they are rivals for trade in one hundred

and fourteen streets. The royal water-works have not changed in any particular, and still furnish water from the same sources they always did, the same water, in fact, which our Munich friend, who was returning from Nuremberg, said he never touched, and therefore was healthy, and the same water which others, not so abstenious, drank and therefore died.

To procure reliable information, I asked the director, Count Gustav von Castell, who has always been warmly interested in sanitary matters, to permit me to examine the books containing the water rates according to which house proprietors must pay. As people never pay more than they can help in the way of water rates or taxes, I am sure no more houses and streets are registered than should be. I found that 871 houses are still supplied by the royal water-works. Having the number of houses so supplied, I went to the statistical bureau of the city, the director of which, Mr. Probst, furnished me with the number of inhabitants in these houses, and according to the last census there were 23,302 people living in these 871 houses, and that according to the vital statistics they suffered no more from typhoid fever than the other population of Munich, who are supplied with drinking water from the other water-works. As the Pettenkofer water-works were too early, so the highland water-works were too late to be of service to the believers in the drinking-water theory; and now comes the old unchanged royal water-works and makes the theory more and more ridiculous.

Just here many persons might ask what is the use, then, of water-works, and why have so many millions been spent on them lately in Munich? A few words about that, also. Although no believer in the drinking-water theory, I am a fanatic on the subject of water, and demand for every human dwelling-place plenty of good pure water, if possible, upon every floor of every house, not only for drinking, but also for cleanliness. Everybody concedes that pure water is needed for drinking. According to the observations of Dr. Carl von Voit, an adult in repose secretes through the kidneys, intestines, skin, and respiratory organs 2,000 grams (2 liters) of water a day; if at work, 3,000 grams (3 liters) or more a day. Our food, it is true, contains a considerable quantity of water, but not enough to dispense with drinking, and a working-man, especially, needs drink. Exactly as the adipose and albuminous tissues waste and change, and must be replaced by the same substances, so it is with the watery tissues, if the man is to keep in a healthy condition. Instead of water we can, of course, drink other liquids containing water, such as beer, which ordinarily has about 92 per cent. of pure water. But beer also contains about 3 to 4 per cent. of alcohol, and we must avoid taking too much alcohol. A general warfare is being waged against the demoralizing effects of so-called alcoholism, but without a plentiful supply of pure and palatable water the contest will be in vain. Except in cases of necessity people will not drink what they do not relish, consequently the drinking water must be palatable and drank with pleasure. Moreover, it is the most innocent and the cheapest drink for the young, the adult and the aged, for the sick and the healthy, and it is, therefore, from a hygienic standpoint of much greater importance that a city should have good water than good beer or wine.

If the people of Munich can spend *yearly* 30,000,000 of marks for beer, we certainly can spend once for all 10,000,000 of marks for water.

According to present rates of interest this is not quite 400,000 marks a year; not the seventy-fifth part of the amount spent annually for beer, and water is of equal benefit to rich and poor. This also settles one part of the social problem. In addition, we need much more water for cleanliness than for drinking. We can not clean with impure water, for the water not only smirches what it touches, but when evaporated leaves behind its impurities in a highly concentrated form, thus adding impurity to the dirt already accumulated. Consequently, I consider it important to have pure water for all cleansing purposes. Water may contain some pathogenic germs, so diluted that it may be drank with impunity; but to cause disease, these germs must not only have a certain quality, but there must be a certain quantity of them, and so it is possible that a few germs from the water might find a favorable lodging-place in the house; there they might multiply to such an extent and to such a virulency that infection would ensue. Hence I go much further in the matter of providing pure water than the believers in the drinking-water theory, who only consider it as a preventive of typhoid and cholera. I claim it to be universally necessary to health, as much so as is pure air.

The simple reason why I have sworn enmity to the drinking-water theory and propose to wage against it war to the knife is, that it is not only an obstacle to forming a correct theory, but also because it prevents attention to the proper draining of the ground on which we live, and seems to have occupied the thoughts of many to the exclusion of every other idea. This rock in the path must be blown to atoms, and the débris removed, in order that progress may be made in the proper direction. Although seventy years of age, it is possible that I may live to see this difficult and thankless task accomplished, for I have now gained an ally in *bacteriology*, and I hope that this young and growing science may succeed where the old science, *epidemiology*, fell short of perfect success. But I had better treat of this subject at another time.

Finally, I will now explain what may account for the surprising decrease of typhoid fever in Munich. What has been done in our art-renowned typhoid city since 1851 that could account for this improvement? Has medical science accomplished it? Typhoid fever is most certainly better treated in 1888 than in 1858. The sick are no longer kept on such meager diet as formerly; in fact, they used to keep the patient hungry, but now the patient is urged to eat, and even to take plenty of wine and other alcoholic drinks, which I was taught to regard as criminal when, as a student, I practiced in the hospital under Ringseis' direction. A typhoid-fever patient in my charge, with high fever, who saw a convalescent in the ward drinking red wine, begged me piteously to prescribe wine for him also. I explained to him that it would be poison for him in his present condition and would greatly aggravate his disease, but held out to him the prospect of having the wine when he was free of fever like the patient he saw drinking wine, and who had survived the fever only through careful diet and abstention from alcoholic drinks. The poor fellow never enjoyed his wine, as he died in a few days. Now I often think he might have recovered if I had prescribed meat and wine for him. Formerly, a patient with fever was wrapped in warm bed-clothes to protect him from the air; nowadays, thanks to the work of Brond, the patient is given a cooling bath, and a window is kept open, etc. It is undoubtedly true that

medical skill now relieves more typhoid patients than formerly; but the great decrease in typhoid fever in Munich can only be accounted for thus to a very slight extent, for any physician of long experience will testify that the doctors have decidedly fewer patients to treat. The records of admissions into the hospitals for typhoid fever, both the military and other hospitals, prove this clearly, and these records are most accurately kept. I refer to the work of von Zinnsen, which distinctly proves that not only the fatal cases have decreased in so marked a manner, but cases of all kinds are much less frequent than formerly, even when typhoid fever was being treated as it now is and when there was still a considerable number of deaths from it. If more recover now than formerly, it is in part due most certainly to the fact that the epidemic is in a milder form, and that in turn is due to the decrease either in the quantity or virulence of the infectious matter.

It is an established fact, as Port has shown for military hospitals, that there is a vast difference in the results of typhoid-fever cases in the different occurrences of the epidemic, notwithstanding the same treatment had been used. It is possible that as typhoid fever became rarer it also took a milder form. Neither will the change in the constitutions of the inhabitants, the so-called individual disposition, explain the great decrease of typhoid fever in Munich, although this individual disposition plays no small part in typhoid, as well as in other diseases and epidemics. It often happens that of many people exposed to the same epidemic but few are affected, and these in very different degrees. But we can prove that the constitution of the Münchener has not altered. A favorite argument for the explanation of the decrease in an epidemic is the immunity obtained by having passed through the contagious disorder; they say when the disease has attacked all persons liable thereto it must cease or at lease decrease, because of a failure of subjects for the disease to attack, for all or almost all the inhabitants have been subjected to this "*seasoning*" process, and it takes some time to restore the individual disposition to its normal condition. If this were the case typhoid fever long ago would have decreased in Munich, for the inhabitants of no place in Bavaria have been so often and so thoroughly *seasoned* in epidemics as the people of Munich. To this seasoning was attributed the fact, that strangers coming to Munich "*unseasoned*" (such as servants, soldiers, students, etc.) were more readily attacked by typhoid fever than the "seasoned" Münchener. This is in point of fact true, but it by no means proves that the infection came from typhoid patients, or from the drinking water which might be supposed to contain the typhoid germ; for when the typhoid fever had least power the strangers as well as natives shared the benefit. In the years 1851, 1859, 1867, and 1876, with a minimum of typhoid fever, no fewer students, servants, and recruits came into Munich than in the years 1858, 1864, 1872, and 1879, when typhoid fever reached its highest points. In fact, if the prevalence of typhoid fever depended upon the advent of "unseasoned" persons then it ought to have steadily increased, for since 1851 the population has increased from 123,957 to 268,400, more than double. Up to this point I have been discussing what can not account for the decrease of typhoid fever in Munich; it yet remains for me to give my opinion as to the actual causes of its decrease.

If typhoid epidemics do not arise from the patient, nor from drinking water that is infected from patients, Munich itself, the locality on

which Munich is situated, must be the source of the trouble. Typhoid fever and cholera show as clearly as malaria and ague, a relationship to the locality and the season of the year, and just as a successful fight against malaria is only possible when we can do the proper work on the ground or soil itself, so it is with typhoid fever and cholera. It would be rather remarkable if malaria was the only infectious disease that arose from the soil. The horrors of the cholera in 1854 for the first time drew attention to the condition of the soil of Munich. The cholera of 1836 had been very conveniently explained by ascribing it to the invisible "*genus epidemicus.*"

Here in Munich we have a very porous soil, which is able to absorb a great quantity of stuff that may serve as food for the pathogenic germs in the soil. Human excrement forms an important and clearly-perceived part of the pollution of the soil of a city, and also cess-pools, if they are not water-tight, and the ground is as porous as it is in Munich. The first thing the health officers did after the cholera of 1854 was to order that all the cess-pools should be water-tight for all houses to be built thereafter, or at least the cess-pools should be water-tight casks, and that by the year 1860 water-tight cess-pools should be substituted for the old ones in all houses. A police official was appointed inspector, to whom all sewers and cess-pools were reported, and whose duty it was to examine into their condition and to order such repairs as were needed. Until that all cess-pools had been sinks whose liquid contents had been mostly absorbed by the soil. Many house-owners complained bitterly of this severe and, in their opinion useless, novel regulation. I once overheard a very reputable citizen complaining bitterly to Police Director von Düring that such cess-pools had been required to be provided. He had built a new house and had conformed to the law, but now he was required to furnish his old house also with a water-tight cess-pool, and the old cess-pool was much better than the one for his new building. The cess-pool at his new house was full to overflowing in a few months' use and had to be emptied, while the old cess-pool in twenty years had needed no attention. The introduction of water-tight cess-pools had the same effect as if Munich had been supplied with a much less porous soil, as the result would be the same if the soil got less to absorb or it absorbed less.

Another source of trouble was the great number of sinks for rain-water and waste water used for domestic purposes, and since 1860 every effort has been made to improve them; where regular sewers were not yet available, the impure water was conducted by gutters into the town streams, the rivers, or the canals; but this mode of providing for the sewerage left much to be desired. These measures were far from producing all at once a perfect sanitation of the badly-contaminated soil of Munich; but still they had effected a very obvious improvement, as seen in the second typhoid-fever period. A contaminated soil can not suddenly be purified by the best of regulations against contamination, any more than corpses in a cemetery are all decomposed the moment they cease burying therein, or a manured field becomes unfruitful as soon as manuring is stopped. All this needs time; the harvest from such fields year by year grows gradually less, until plowing and sowing become useless, for nothing grows. Gradually, also, the ground will master the filth if man ceases further to pollute it, just as it will dispose of the corpses if there is no more burying. The ground has the capacity to purify itself and remain so, and, if only so much filth is

put into the soil as it can dispose of and no more, there is no danger. In a clean or purified soil the ground or subsoil water may rise and fall at will, for the dampness which it occasions does not produce such consequences as are produced in an impure soil. And if the cess-pools of Munich are not yet all absolutely water-tight, at any rate very much less finds its way from them than formerly. The conviction grew daily stronger in Munich that it was impossible to have proper sanitary arrangements for the city and the houses, without a rational drain or sewer system. This was made more certain from the marked consequences that followed similar sanitary measures in many English towns, and also in some German towns, as Frankfort-on-the-Main, under Dr. Varrentrapp's urging; Danzig, under the direction of its intelligent and energetic chief burgomaster, von Winter. Munich has had the good fortune to have had Dr. von Erhardt as first burgomaster, a man of unusually clear judgment in sanitary matters, and under him at length the sewering of the city was determined upon. As early as 1858 good sewers, after plans by Oberbaurath (chief building councilor) Zaretti, had been begun in the suburbs, called the Ludwig and Max suburbs, and in 1878 twenty-six kilometers had been finished. For some years then the building of sewers was interrupted, because the city authorities resolved to have plans prepared by J. Gordon, an English engineer, for the systematic drainage of the whole city.

After these plans had been prepared the work was taken up again, and from 1881 to 1887 forty-eight kilometers were completed, and also in that time quite a large number of cess-pools for waste water from houses have disappeared. The canalization or sewering of the city has gradually become popular, so that now many who at first opposed the scheme and denounced me heartily approve of it, and we may confidently expect that this great sanitary work will be completed in the course of a few years.

Another work of great sanitary importance in addition to the drainage or sewerage must not be passed over in silence, viz, the new abattoir, cattle-yards, and market in the Thalkirchner street, erected according to the admirable plans of Arnold Zenetti. This new abattoir was opened on the 1st of September, 1878, and at one blow eight hundred separate slaughter-houses, which were distributed throughout the entire city, disappeared; these belonged to butchers, sausage-makers, publicans, restaurant keepers, and others, and all had manure heaps and pits and cess-pools connected with them. Only those who have seen the filth and the condition of these back buildings and yards, who have breathed the air and smelled the stench therein, can possibly appreciate how much less the soil of Munich is contaminated since the opening of the new cattle-yard and abattoir. The sudden rapid decline in the prevalence of typhoid tells the story in no uncertain tones. The frequency of typhoid fever, it is true, had been gradually diminishing since 1860, but the marked difference between 1879 and 1881, as seen at a glance from the diagram, has something so astonishing in it, that every person skilled in sanitary matters will at once recognize the evident influence of the new abattoir. The connection between the decline of typhoid fever in Munich and the purification of the soil and keeping it clean has been shown by Sayka in a paper, in which he contrasts the prevalence of typhoid fever in Munich in drained and undrained districts, or before and after draining. He arrives at the following conclusion: "Concerning the decrease in abdominal typhoid

in Munich there are so many peculiar modifications of this decrease, all so intimately and closely following, both as to place and time—modifications of the drainage—that the probabilities of the beneficial effect proceeding from sewerage become very great, and the observations made regarding the same have almost the value of an experiment."

In speaking thus of the chances that drainage is so efficacious, Sayka expresses himself in an exceedingly scientific, exact, and cautious manner when he uses the word probability; the conditions being really such that unless there is a desire to fold the hands and do nothing, we would, in ordinary practical life, take it for proved to a certainty. According to exact scientific principles the observations made in Munich have not the value absolutely of experiments made in a laboratory, but they have been in fact practical experiments upon a large scale for the sanitation of a pestilential city, and the experiment has succeeded here as it has in other places.

A particularly instructive experiment is the sanitary improvement of a quarter of Munich known as the "*Grube*," or den of Haidbonsen, to which I directed attention in my book called "The Present State of the Cholera Question," page 722, which is also illustrated with the necessary cuts. This "Grube," or pit, was inhabited by about five hundred people, and was formerly the worst hot-bed for typhoid and cholera in the city. Since the removal of all the old porous sewers and cess-pools, and its drainage by means of a proper sewer, with nothing else changed, it has become free entirely from these diseases, although the people use identically the same drinking water as formerly, while the people in the neighboring quarter of the city, who had the best of drinking water, but the old cess-pools and sewers, were still afflicted with typhoid. Sayka, in his capacity as a practical health officer, is now advising the town authorities of Prague to make the same experiment with sewerage and house drainage as has been done in Munich, and leave for the future the study of the exact scientific reasons for their necessity.

It is true, speaking scientifically, that many points are still obscure, as, for instance, how good drainage and sewerage, cleansing and keeping clean the soil, are connected with the specific germs of typhoid and cholera; how places thus treated not only lose their predisposition to such diseases, but become absolutely free from them. But facts often outrun science. Long before the discovery of America the Indians had found out that Peruvian bark cured the ague. Only after the lapse of centuries has science (chemistry) discovered that the efficacy of the bark comes from its containing an alkaloid which can be crystallized, which we call quinine, but why it is that quinine cures the ague we know as little to-day as we know why places with good sanitation become indisposed to, or entirely exempt from, typhoid and cholera. The further developments of experimental hygiene, especially as now assisted by bacteriology, will explain much that is now unexplained; but hygiene has not only a theoretical but also a practical side, and, viewed practically, action can not be postponed until all learned men agree. Here facts must be dealt with that have a practical value apart and aside from all theories. One such fact is, that a pestilential soil, as it was first called by Naegeli, can be made healthy by certain technical treatment, and that this is what has been done in Munich, so far as typhoid fever and cholera is concerned.

THE PREVENTION OF TUBERCULOSIS.

[Translation from the *Hamburgischer Correspondent*, September 19, 1889.]

The German Society for Public Hygiene in Strasburg had in its session for the second transaction, "The Prevention of Tuberculosis." Prof. Dr. Heller-Kiel spoke; he first described the significance of tuberculosis, which is indeed so great as to justify extraordinary measures of antagonism. On the one side tuberculosis is, in fact, the most important disease, having the highest rate among the causes of death. It is the most important disease in an economic respect, inasmuch as those suffering therefrom die after a long sickness with diminished or abolished power of activity. Finally, it is dangerous on account of its contagious power. He designates the inheritance of the disease as indeed possible, but at all events practically as unimportant; the frequent appearance of tuberculosis in single families is explained far more simply by the circumstances which favor the contagion in such cases. The most essential, really the sole essential thing, is the transmission from other tuberculous human beings and animals, from the latter especially, by the parts serving as nourishment, milk being first. The speaker designated, first, efficient school hygiene as an effective measure for fighting against the destructive disease. The spittoon should also be introduced into schools. Every child that coughs ought to be made to use the spittoon, so that the expectoration, the main source of transmission, be made innocuous, and thereby the advantage will also be gained that many germs of diphtheria will be destroyed. In consideration of the frequent appearance of consumption among teachers, the teacher himself must practice the corresponding precaution. Regular wet-cleaning and frequent disinfection of school-rooms must be added. Nurses and persons occupied in the preparation and sale of food must constantly be taken notice of relative to their health, those that cough must be excluded entirely from the latter occupation. With respect to the transmission of tuberculosis from animals, a severe compulsory inspection of meat, condemnation of all animals found to be tuberculous, veterinary watching over of stalls suspected of tuberculosis, destruction of tuberculous animals, and close surveillance of the milk traffic would be appropriate for attaining the desirable effects.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Oct. 5	5,642,015	1,739	.....	.....	.....	.....	19	25	52	11	.....
Paris	Oct. 5	2,260,945	1,012	.....	.....	3	.....	31	.....	27	16	14
Glasgow	Oct. 5	545,678	208	.....	.....	.....	.....	6	3	3	.....	.....
Warsaw	Sept. 21	445,770	261	.....	.....	30	.....	.....	4	15	.....	.....
Warsaw	Sept. 28	445,770	249	.....	.....	33	.....	.....	9	11	.....	.....
Calcutta	Aug. 31	433,219	199	6	.....	1	.....	.....	.....	.....	1	.....
Calcutta	Sept. 7	433,219	219	6	.....	1	.....	.....	.....	1	.....	.....
Calcutta	Sept. 14	433,219	230	11	.....	1	.....	.....	.....	.....	.....	.....
Rome	Aug. 3	407,935	169	.....	.....	3	.....	4	.....	4	.....	.....
Rome	Aug. 10	407,935	155	.....	.....	.....	.....	5	.....	.....	.....	.....
Rome	Aug. 17	407,935	160	.....	.....	1	.....	2	.....	3	.....	.....
Rome	Aug. 24	407,935	.....	.....	.....	2	.....	2	.....	2	.....	.....
Copenhagen	Sept. 28	307,000	132	.....	.....	.....	.....	2	.....	11	.....	.....
Belfast	Oct. 5	229,622	97	.....	.....	.....	.....	5	2	2	.....	.....
Genoa	Oct. 5	180,329	78	.....	.....	.....	1	.....	.....	.....	.....	.....
Stuttgart	Oct. 5	125,510	34	.....	.....	.....	.....	.....	.....	1	.....	.....
Havre	Oct. 5	112,074	57	.....	.....	.....	.....	.....	.....	.....	.....	.....
Catania	Oct. 7	108,000	30	.....	.....	.....	.....	1	1	1	.....	.....
Leghorn	Oct. 6	103,287	35	.....	.....	.....	.....	.....	.....	1	.....	.....
Cadiz	Sept. 28	57,197	41	.....	.....	1	.....	.....	.....	.....	.....	.....
Cienfuegos	Sept. 23	40,655	13	.....	1	.....	.....	.....	.....	.....	.....	.....
Cienfuegos	Sept. 30	40,655	17	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cienfuegos	Oct. 7	40,655	14	.....	1	.....	.....	1	.....	.....	.....	.....
Vera Cruz	Oct. 10	23,800	30	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Sept. 29	23,681	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Oct. 6	23,681	18	.....	.....	.....	.....	.....	.....	3	.....	.....
Laguayra	Sept. 28	7,428	7	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 44. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., November 1, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended November 1, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.

UNITED STATES.

Special Reports.

YELLOW FEVER—*Key West, Florida*—

BULLETIN NO. 2, STATE BOARD OF HEALTH OF FLORIDA.

OFFICE OF STATE HEALTH OFFICER,
Key West, Fla., Saturday, October 19, 1889.

An official report of "suspicious cases of fever" at Key West, received at the office of the State board of health on October 7, caused the State health officer, who was then in Jacksonville, to be sent here to investigate. The following are the facts obtainable and which are now given to the public:

About September 21 a case of yellow fever was recognized by the surgeon of the Marine Hospital Service stationed at this port, in the person of Abraham Horn, a peddler, who was at the time convalescent.

On the 5th of October the same medical gentlman recognized two cases of yellow fever in the persons of Wolff Abraham and his wife; the wife being convalescent, the husband being still in bed.

These above-named cases were reported to Surgeon-General Hamilton as yellow fever. The fourth case was recognized by Assistant Surgeon Geddings, of the Marine Hospital Service, and myself, on the twelfth day of illness, the attending physician, Surgeon Murray, dissenting from this diagnosis.

Abraham Horn I did not see, and Wolff Abraham and his wife were up and about their room and premises at my visit, but I have no hesitation in saying that from the verbal and written report of the cases, particularly of the woman, by the attending physician, Dr Plummer, who reports the cases merely as "*suspicious*," I believe these parties to have had yellow fever.

The Rev. Mr. Householder, the fourth and last case, is now sufficiently recovered so as to leave his house, and as it has been three weeks since his seizure and no other cases have arisen in his family, all restrictions of egress and ingress have been removed from the premises.

Every precaution has been used to prevent the spread of the disease, and the infected bedding, and other articles liable to carry infection, that could not be subjected to moist heat, have been destroyed and paid for. The premises of Abraham and the Rev. Mr. Householder have also been disinfected and cleaned. The city has been ordered to be cleaned, and all the foul spots disinfected, under the direction of the city health officer, who to-day reports the completion of his task.

At the time and immediately preceding the occurrence of the fever cases there had been an unusually heavy rain-fall at this place, followed by a period of intense heat of about a week. Happily this was of brief duration, and being followed by cool north winds had the effect, to my mind, of arresting any spread of the fever. For the past two weeks the weather has been unusually cool for this place at this season.

The failure to report the facts in the three first cases to the State health authorities, and the cases having been located in different sections of the town, warranted, at the date of my arrival (8th instant) "the assumption of belief of the possibility of the presence of infection, from whatever source introduced, still remaining," and the State health officer was justified at that time, and his duty demanded, in view of all attending circumstances, the placing of quarantine restrictions on Key West, awaiting further developments.

Sufficient time has now elapsed since the occurrence of the last case without any further recurrence of cases to permit me to state that travel can safely be resumed.

Therefore I hereby remove all quarantine restrictions on travel from Key West, Fla., and request a similar action by all State boards of health of neighboring States.

JOSEPH Y. PORTER, M. D.,
State Health Officer.

BULLETIN NO. 3, STATE BOARD OF HEALTH OF FLORIDA.

OFFICE OF STATE HEALTH OFFICER,
Key West, Fla., October 21, 1889.

The occurrence of another sporadic case of yellow fever here, discovered to-night, necessitates revoking so much of Bulletin No. 2, issued Saturday, 19th instant, as *permits* travel to be resumed, and removes quarantine restrictions from Key West. And, accordingly, the restrictions on travel placed in force on October 10, are re-enacted.

It is impossible to trace any connection between the case discovered to-night (Ernest Ellinger, a prominent cigar manufacturer) with any of the previously reported cases of yellow fever this season. He left Havana on September 21, and went direct by sea to New York, returning here overland on October 1, and is now sick in an entirely different section of the town from where the other cases occurred.

The space of three weeks having elapsed since the occurrence of the case preceding the one discovered to-night gave good reason to believe that the disease had ceased, particularly as there were no new developments of cases in the Householder family and there had been ample time for other developments from the first three cases.

Mr. Ellinger is isolated, and every care is being exercised to prevent any spread of the disease from him.

There has been no epidemic prevailing here, and there need be no apprehension felt by the public (proper precautions being heeded)

either here or away, as due care is being instituted to prevent the disease from spreading.

It (the public) will be kept well informed from time to time of the sanitary situation at this point.

JOSEPH Y. PORTER, M. D.,
State Health Officer.

YELLOW FEVER—*New York Quarantine*—

QUARANTINE, S. I., *October* 24, 1889.

DEAR DOCTOR: I desire to inform you that the steamship Hondo from Central American ports, Livingstone being the last port (the 13th instant), arrived at this port the 23d instant.

William Bruins, cabin passenger, German, resident of Guatemala, was taken sick on the 15th and died an hour after arrival at quarantine. An autopsy of the case leaves no doubt that the disease of which he died was yellow fever. No other case of sickness has occurred on board, although eleven days have elapsed since the steamer left her last port, and nine days since the disease developed in the passenger named.

The vessel was thoroughly disinfected, and given *pratique* to day.

Very respectfully,

WM. M. SMITH,
Health Officer.

J. B. HAMILTON, M. D.,
Surgeon-General U. S. Marine-Hospital Service.

ATMOSPHERIC DISTURBANCE IN MICHIGAN.—The following bulletin has been received regarding "One cause of sickness and discomfort largely preventable:"

OFFICE OF THE STATE BOARD OF HEALTH,
Lansing, Mich., October 23, 1889.

Owing to the drought, fires, especially in swampy places, are numerous, and the atmosphere is unusually smoky and irritating to the eyes, head, and air-passages. Some diseases are aggravated.* Sleeplessness, nervous disturbance, general discomfort, and, I believe, other serious troubles not commonly recognized as due to this cause, result, because the atmosphere is to a considerable extent unfitted to properly sustain life. One apparent change in the atmosphere is to lessen below the normal limit the active oxygen, and this is especially true during the nights; thus, during the week ending October 19, no ozone whatever could be detected in the atmosphere at Lansing any night except one—Wednesday. A sense of want of air, even approaching suffocation and a weakness of the circulation, in some approaching heart failure, has been noticed.

The object of this note is to ask attention to the fact that much of this discomfort and danger to health could easily be prevented if all persons would refrain from setting fire to rubbish until after this bad condition of the atmosphere has passed. On some evenings dozens of such fires have been set in one small city in the interior of this State. As "the wind goes down with the sun," nearly all the irritating smoke

*During the week ending October 19 tonsillitis increased 50 per cent.; pleuritis, 33 per per cent.; inflammation of the brain, 25 per cent.; and membranous croup, 25 per cent. Probably other causes than the one here mentioned had influence, but the other atmospheric conditions were not such as to account for such increase.

and bad air from such fires built in the evening remain in the city or village, and must be breathed by the inhabitants.

If such fires must be made, it would be very much better to build them in the morning, because the movement of the atmosphere then usually increases until 2 p. m., and that may carry the foul and irritating air from such burning rubbish outside the city or village.

HENRY B. BAKER,
Secretary.

An account of atmospheric disturbances at San Diego, Cal., due to a like cause to that above mentioned, is contained in Abstract No. 42 of the current volume.

Reports of States, and Yearly and Monthly Reports of Cities.

ALABAMA—*Mobile.*—Month of September, 1889. Population (estimated), 40,000; total deaths, 79.

ILLINOIS—*Chicago.*—The report of the department of public health, Oscar C. De Wolff, M. D., commissioner, for the year 1888, shows in an estimated population of 830,000 a total of 15,772 deaths. "The only disease persistently appearing in rather unusual number of deaths was diphtheria." Sanitary examinations were made of 404,138 rooms in 34,966 houses, and of 32,387 factories, stores, and other places of employment at labor.

MICHIGAN.—Week ended October 19, 1889. Reports to the State board of health, Lansing, from 58 observers, indicate that tonsillitis, pleuritis, inflammation of brain, and membranous croup increased, and that typhoid fever, erysipelas, measles, diphtheria, and inflammation of the bowels decreased, in area of prevalence. The disease having the greatest area of prevalence was rheumatism.

NEW HAMPSHIRE.—Month of September, 1889. There were reported to the State board of health from 10 cities and villages 59 cases of diphtheria. Eight of the above cases are included in the report from Portsmouth for August and September. Four cities reported 19 cases of scarlet fever. Seventeen cities and villages reported 54 cases of typhoid fever.

RHODE ISLAND.—Month of September, 1889. The number of deaths in the towns making returns and representing an estimated population of 312,310 was 499. There was a falling off of 50 per cent. in diarrhœal diseases as compared with the previous month. Diphtheria was reported in one-fourth of all the towns; scarlet fever in 2 towns only. Typhoid fever quite largely increased in number of cases in more than one-half the towns, although not epidemic in any reported locality.

TENNESSEE.—The principal diseases named in the order of greater prevalence during September, 1889, were malarial fever, dysentery, diarrhœa, consumption, rheumatism, pneumonia, tonsillitis, cholera-infantum, and bronchitis.

Typhoid fever was reported in 20 counties; Diphtheria in 12; scarlet fever in 7. Twelve counties out of 96 are reported as having no organized board of health.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Oct. 26	1,586,567	612	.....	.....	.....	.....	.....	.....	14	5	16	2	11
Philadelphia, Pa.	Oct. 19	1,040,245	327	.....	.....	.....	.....	.....	.....	9	5	13	.....	3
Baltimore, Md.	Oct. 26	500,343	156	.....	.....	.....	.....	.....	.....	3	2	7	.....	1
Boston, Mass.	Oct. 26	420,000	180	.....	.....	.....	.....	.....	.....	6	.....	11	.....	2
Cincinnati, Ohio.	Oct. 26	325,000	108	.....	.....	.....	.....	.....	.....	5	.....	8	.....	.....
New Orleans, La.	Oct. 19	254,000	107	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Washington, D. C.	Oct. 19	250,000	100	.....	.....	.....	.....	.....	.....	4	.....	5	.....	2
Detroit, Mich.	Oct. 19	250,000	68	.....	.....	.....	.....	.....	.....	.....	2	4	.....	.....
Louisville, Ky.	Oct. 19	227,000	45	.....	.....	.....	.....	.....	.....	2	2	.....	.....	.....
Minneapolis, Minn.	Oct. 26	200,000	45	.....	.....	.....	.....	.....	.....	1	1	3	.....	.....
Kansas City, Mo.	Oct. 26	180,000	44	.....	.....	.....	.....	.....	.....	3	1	1	.....	.....
Providence, R. I.	Oct. 26	127,000	46	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Indianapolis, Ind.	Oct. 25	.....	28	.....	.....	.....	.....	.....	.....	2	2	1	.....	.....
Toledo, Ohio.	Oct. 25	89,000	32	.....	.....	.....	.....	.....	.....	1	1	7	.....	.....
Fall River, Mass.	Oct. 26	69,000	15	.....	.....	.....	.....	.....	.....	1	1	.....	.....	1
Nashville, Tenn.	Oct. 26	65,153	23	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Charleston, S. C.	Oct. 26	60,145	44	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Lynn, Mass.	Oct. 26	53,000	19	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Portland, Me.	Oct. 26	42,000	17	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Manchester, N. H.	Oct. 19	42,000	19	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Galveston, Tex.	Oct. 11	40,000	13	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Council Bluffs, Iowa.	Oct. 14	35,000	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Council Bluffs, Iowa.	Oct. 21	35,000	7	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Binghamton, N. Y.	Oct. 26	30,000	14	.....	.....	.....	.....	.....	.....	1	1	.....	.....	1
Haverhill, Mass.	Oct. 26	25,000	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....	.....
Newton, Mass.	Oct. 19	21,553	5	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Newton, Mass.	Oct. 26	21,553	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Oct. 20	16,000	7	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended October 12 corresponded to an annual rate of 17.5 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Cardiff, viz, 9.3, and the highest in Plymouth, viz, 32.7 a thousand. Diphtheria caused 7 deaths in Manchester, 5 in Salford, and 2 in Liverpool.

London.—One thousand three hundred and twenty-one deaths were registered during the week, including measles, 13; scarlet fever, 15; diphtheria, 35; whooping-cough, 14; enteric fever, 16; diarrhœa and dysentery, 28; and not one from cholera or small-pox. The deaths from all causes corresponded to an annual rate of 15.8 a thousand. Diseases of the respiratory organs caused 264 deaths. In greater London 1,644 deaths were registered, corresponding to an annual rate of 15.2 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 9; scarlet-fever, 7; and diphtheria, 7.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended October 12, in the 16 principal town districts of Ireland, was 21.7 a thousand of the population. The lowest rate was recorded in Dundalk, viz, 4.4, and the highest in Wexford, viz, 29.9 a thousand. In Dublin 157 deaths were registered, including measles, 2; enteric fever, 7; diarrhœa, 13; and dysentery, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended September 28 corresponded to an annual rate of 18.8 a thousand of the population, which is estimated at 1,329,884. The lowest mortality was recorded in Perth, viz, 9.5, and the highest in Leith, viz, 25.2 a thousand. The aggregate number of deaths registered from all causes was 481, including measles, 6; scarlet fever, 4; diphtheria, 9; whooping-cough, 14; fever, 11; and diarrhœa, 30.

SANDWICH ISLANDS—LEPROSY.

[Translated from the *Deutsche Correspondent*, October 19, 1889.]

The Hawaiian consul, in an article addressed to the Times, gives an interesting history of the specific disease of the Hawaiian Islands, leprosy. The first case appeared about forty years ago. Within twenty years a great part of the population fell victims to the terrible disease. In 1865 the patients were moved and restricted to the island of Molokai. At first great disorder prevailed in the colony, but in the year 1873 a Mr. Ragsdale offered his services as superintendent of the asylum, and

conducted its affairs well during his life-time. To-day the colony of patients is by no means a mass of discontented people, for the love of work, a religious sentiment, and resignation is strongly developed in them. Their number changes from time to time; it was largest in 1884, when it reached 100; it is worthy of notice that most patients are men. The colony has received an appropriation of $100,000 from the Government, and the royal couple attest great sympathy for the unfortunate ones. Three years ago they (the royal couple) paid the colony a visit, upon which occasion a psalm composed by the King was sung. The average duration of the disease is eleven years, the death percentage 58 a thousand. Until now there is no remedy for the disease, but an oil, the so-called Giurjun-oil, received from the India government, is said to possess a healing effect. The doctor of the colony, Dr. Hoffmann, is suffering himself with leprosy.

SPAIN—LEPROSY.

[Translation from *La Hygiene*, Madrid, June, 1889.]

Some time ago leprosy declared itself in a family in Santa Maria de Esteiro, near Muros, and to-day five married neighbors in the same village and their children are suffering with the disease. It is probable that after there are only a few healthy persons left in the village a commission will be appointed to study the manner of preventing the progress of the scourge, and their recommendations may be carried out, but it will be too late to be of any avail.

CUBA.—*Leprosy.*—At the recent meeting of the American Public Health Association, in Brooklyn, N. Y., October 22, Dr. Benjamin Lea, of Philadelphia, presented a paper showing the alarming prevalence of leprosy in Cuba. A resolution was passed by the association requesting the Surgeon-General of the Marine-Hospital Service, the State board of health of Florida, and all quarantine commissioners of ports having intercourse with Cuban ports, to exercise the same vigilance with regard to leprosy that is already observed with regard to yellow fever.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Oct. 12	5,642,015	1,644	.....	.....	.....	1	16	22	42	19	.....
Paris	Oct. 12	2,260,945	984	.....	.....	.....	.....	21	1	21	4	15
Glasgow	Oct. 12	545,678	219	.....	.....	.....	.....	.....	2	6	.....	.....
Buenos Ayres	July 31	516,110	1,329	.....	.....	10	.....	36	1	21	.....	.....
Warsaw	Oct. 5	445,770	264	.....	.....	27	.....	.....	6	10	.....	.....
Amsterdam	Oct. 5	399,424	146	.....	.....	.....	.....	1	1	4	.....	.....
Amsterdam	Oct. 12	399,424	.....	.....	.....	.....	.....	1	.....	8	.....	.....
Copenhagen	Oct. 5	307,000	100	.....	.....	.....	.....	2	1	9	.....	.....
Edinburgh	Sept. 7	266,900	65	.....	.....	.....	.....	.....	1	2	.....	.....
Edinburgh	Sept. 14	266,900	77	.....	.....	.....	2	.....	1	2	.....	.....
Palermo	Oct. 12	250,000	63	.....	.....	.....	.....	.....	1	.....	.....	.....
Belfast	Oct. 12	229,622	89	.....	.....	.....	.....	7	.....	2	.....	.....
Bristol	Aug. 17	229,361	70	.....	.....	.....	.....	1	.....	.....	.....	.....
Bristol	Aug. 24	229,361	90	.....	.....	.....	.....	.....	1	.....	.....	.....
Bristol	Aug. 31	229,361	72	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bristol	Sept. 7	229,361	61	.....	.....	.....	.....	.....	1	.....	.....	.....
Bristol	Sept. 14	229,361	79	.....	.....	.....	.....	1	.....	1	.....	.....
Bristol	Sept. 21	229,361	68	.....	.....	.....	.....	.....	1	.....	.....	.....
Bristol	Sept. 28	229,361	81	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bristol	Oct. 5	229,361	70	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bristol	Oct. 12	229,361	54	.....	.....	.....	.....	.....	.....	1	.....	.....
Rotterdam	Oct. 5	197,724	69	.....	.....	.....	.....	2	3	.....	.....	.....
Rotterdam	Oct. 12	197,724	74	.....	.....	.....	.....	2	2	2	.....	.....
Genoa	Oct. 12	180,350	71	.....	.....	.....	1	.....	.....	1	.....	.....
Trieste	Sept. 21	154,500	70	.....	.....	.....	.....	.....	.....	2	.....	.....
Trieste	Sept. 28	154,500	86	.....	.....	.....	.....	2	1	.....	.....	.....
Trieste	Oct. 5	154,500	54	.....	.....	.....	.....	1	1	.....	.....	.....
Stuttgart	Oct. 12	125,510	50	.....	.....	.....	.....	.....	1	3	.....	.....
Pernambuco	Sept. 17	120,000	89	.....	.....	.....	1	1	2	.....	.....	.....
Pernambuco	Sept. 24	120,000	76	.....	.....	2	1	1	1	.....	.....	.....
Catania	Oct. 14	108,000	35	.....	.....	.....	.....	.....	1	1	.....	.....
Leghorn	Oct. 13	103,287	48	.....	.....	.....	.....	.....	.....	1	.....	.....
Havre	Oct. 12	112,074	.....	.....	.....	.....	.....	3	1	.....	2	2
Barmen	Sept. 28	109,000	26	.....	.....	.....	1	.....	.....	.....	.....	.....
Barmen	Oct. 5	109,000	30	.....	.....	.....	1	.....	.....	1	.....	.....
Rheims	Oct. 12	97,903	41	.....	.....	.....	.....	3	1	1	1	.....
Leith	Sept. 7	76,400	21	.....	.....	.....	.....	.....	1	3	.....	.....
Leith	Sept. 14	76,400	28	.....	.....	.....	.....	.....	1	.....	.....	.....
Mayence	Sept. 28	*65,802	34	.....	.....	.....	.....	.....	1	4	.....	.....
Mayence	Oct. 5	65,802	26	.....	.....	.....	.....	.....	3	.....	.....	.....
Cadiz	Oct. 5	57,157	39	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Oct. 12	57,157	47	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Oct. 7	47,488	42	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ceara, Brazil	Aug. 17	29,000	32	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ceara, Brazil	Aug. 24	29,000	36	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Oct. 17	23,800	25	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Oct. 13	23,631	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Kingston, Can	Oct. 18	18,284	7	.....	.....	.....	.....	.....	.....	.....	.....	.....

*Census.

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract / No. 45. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., November 8, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended November 8, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.

UNITED STATES.

Special Reports.

YELLOW FEVER.—*Key West, Florida*—

STATE BOARD OF HEALTH OF FLORIDA,
Key West, Fla., October 23, 1889.

SIR; Confirming my telegram to you of Monday night, the 21st instant, stating the occurrence of another sporadic case of yellow fever, unconnected with previously reported cases, I have to report to-day in addition the following history as gotten from Dr. R. D. Murray, the now attending physician, from Dr. Armona who attended the case from the 17th to the 19th instant, and from my own observations. The records from the physicians are given now as I obtained them verbally: Dr. Murray promises a written clinical history, which will be sent you when received.

Ernest Ellenger, a prominent cigar manufacturer, of the firm of Julius Ellenger & Co., of this place, has been living here for the past three years, but not continuously; arrived here from New York on October 1, having left Havana on September 21, going direct to New York by sea. On Thursday, October 17, he called on Dr. J. R. Armona at his office, complaining of no appetite, and lassitude, no particular pain or ache; he had no fever at that visit and talked with the doctor for some time concerning the strike of the cigar-makers, which had been the day before precipitated, and received as a prescription Fellows hypophosphites. Friday evening Dr. Armona called on him by request at the hotel and found him in the billiard-room playing billiards; on examination he found that his temperature was 101½ and pulse 75; he ordered him to bed and gave him rhubarb and podophyllin; calling on Saturday about noon he learned that Dr. Murray had been called in, but ascertained his temperature was 102 and pulse 96; Dr. Armona then left the case. Dr. Murray says he saw the patient a little before noon Saturday, the 19th instant, his pulse was 70, temperature 37.5 C., tongue coated with white fur, eyes slightly injected, no headache, no backache, no pain in limbs, and no nausea or vomiting, bowels mildly running off owing to cathartic or purge taken the day before. Saturday afternoon he was up and playing billiards; Saturday night his temperature went up to 40 C., pulse 76; but on Sunday morning (20th) it was 38 C., pulse 76; Sunday night (20th) pulse 76, temperature 39.2 C.; Monday morning (21st) pulse 76, temperature 38.6 C.; Monday evening (21st)

pulse 74, temperature 38 C. I first saw the patient at this visit. He was in bed, skin moist, eyes injected and jaundiced with a glistening appearance, and answered questions in an apathetic, jerky manner; urine was tested and 25 per cent. of albumen was found. The test was the usual one, by heat first, and heat with nitric acid. I have not seen the patient since Monday evening, but the previous history, although obscure, was sufficient with the condition I found him in, and with albuminous urine (he not being a subject of Bright's disease), to cause a diagnosis of yellow fever to be made. In this diagnosis the attending physician (Dr. Murray) agreed.

Tuesday morning, the 22d, the patient's pulse was 68, temperature 37.2 C.; Tuesday evening (22d) pulse 66, temperature 37 C.; Wednesday (23d) morning, pulse 68, temperature 36.6 C.; Wednesday evening, pulse 66, temperature 37 C.

There is no history of Ellenger going near or having any contact with any of the other previously reported cases. His attending physician does not think his case traceable to Key West, but to Havana. He reasons that the poison may remain latent a month, to be excited to activity by some extraordinary depressing physical or psychical cause; in this case the cause is thought to be the general strike of the cigar-makers, and consequent suspension of business. I have not yet come to any definite conclusion. * * *

In respect to removing the quarantine restrictions on last Saturday, 19th instant, which action you in your letter of the 20th considered unwise, I must respectfully beg to disagree with you. We are a unit, I think, in opinion that it is the duty of all health officials to take every necessary precaution, and every requirement that is deemed necessary for the public good and safety should unhesitatingly and without murmur be complied with by the public, still, at the same time, no restriction on the personal liberty of the citizens or on commercial pursuits should be enforced beyond the period that either science or common consent of expert authorities agree is demanded. Now, what are the facts in this instance? They are these: When I reached Key West, on the 8th of the present month, I found that there had been four cases of yellow fever within the month on the island, commencing probably on the 13th of September (for when Dr. Murray saw Horn on the 19th of September he was well, or nearly so); there had been no deaths; three of the cases were up and about when I reached here, the other case was convalescent. It had been three weeks since the last case had been taken sick and there had been no new development of cases in the family, although the other members were exposed. The weather had been *dry* and cool; unusually cool for this place at this season, and finally the infected articles had been destroyed and the town had been cleaned up and all foul spots treated liberally with disinfectants; therefore, in view of the fact that the Montgomery conference adopted Mr. Hyer's answer to Topic 10: "Query, When may refugees safely return to their houses?" viz:

After the occurrence of ice;

After the occurrence of three killing frosts;

After the occurrence of no cases of fever for a period of two weeks; and

After thorough disinfection and ventilation of all localities infected, and bedding and such other articles as are capable of conveying germs (see Report, p. 37), I felt, as there had been no epidemic prevailing, and with no knowledge of a case of a suspicious nature existing in the city, I would not be justified in enforcing any longer quarantine restrictions on the individual or on commerce.

It was indeed unfortunate that the Ellenger case was not discerned earlier, but the obscure and irregular symptoms rendered such preconception of its nature impossible until Monday, when Dr. Murray called upon me and intimated his fears, and it was only late in the afternoon that a positive diagnosis could be determined upon.

The restrictions upon travel will be now continued until contrary instructions are received from your office, and from time to time I will endeavor to keep you fully informed of the situation here.

Very truly,

JOSEPH Y. PORTER,
State Health Officer.

Dr. R. P. DANIEL,
President State Board of Health, Jacksonville, Fla.

STATE BOARD OF HEALTH OF FLORIDA,
Key West, Fla., October 26, 1889.

SIR: I herewith acknowledge the receipt of your letter of the 24th instant, and will give due consideration to its contents. Since my last communication (23d) nothing further in the development of fever cases has arisen. I am giving attention to and endeavoring by inquiries frequently made to learn whether any of the other peddlers have been taken sick since the Wolff Abraham family experienced a seizure; the result so far is negative. It is an exceedingly difficult matter to learn anything about these people, for, being of a nation naturally suspicious and skeptical, they are wary of all queries of any kind that may be put to them, and answer very reservedly, being particularly non-committal of their own doings or whereabouts; answers are usually of a negative character. Coupled with this is one of greater embarrassment, the failure to recognize mild yellow fever by the Cuban physicians, who generally, so I am informed, have attended this class in all their ailments, they living in the Cuban quarter of the town.

Unless a case of yellow fever is of a particularly virulent and violent type, developing fierce fever, black vomit, and death, it is thought by the Cuban physicians to be merely a "calentura" (mild fever of the tropics, ephemeral of our nomenclature). You can understand this more perfectly by reading a reported interview in this evening's paper with Dr. J. R. Armona, the Cuban physician who, for the first few days, attended Mr. Ellenger. You will perceive that he emphatically denies the case to be yellow fever, although he has not seen Mr. Ellenger since last Saturday, the 19th instant. Whilst on this point, permit me to pause, and to say, by way of information, that on Tuesday evening, about 8 o'clock, Dr. Armona called on me, asking to see Mr. Ellenger. I endeavored, as well as I could, to explain to the doctor that unless Dr. Murray, who was Mr. Ellenger's physician, desired his (Dr. Armona's) presence at Mr. Ellenger's bed-side, or as a consultant, that I could not suspend the quarantine restrictions placed upon the room merely for the sake of satisfying a curiosity, either by acclimated physicians or by citizens, to view the patient and pass their opinion on his condition. I further tried to impress on him that, since my first visit with Dr. Murray (Monday night), when my public office carried me there, I had not seen the case, as I did not propose to break my own regulations. Dr. Armona, being very persistent in his demands, and claiming that his reputation as a physician was at stake, I yielded so far as to accord permission, provided his clothes were

changed after coming from the sick-room and before again mingling with the unacclimated. Then he wished to visit the patient at once, but I reminded him that the patient was not mine, and that his professional attendant must be consulted, and suggested waiting until the morning. This he demurred to, and, finally, after seeing Dr. Murray with me, declined to go at all, even that same evening, as he did not care to change his clothes. It matters not for what disease or ailment Dr. Armona attended Mr. Ellenger in former years or in former sicknesses, in his present sickness he has yellow fever, and whenever contracted is not now pertinent to the diagnosis. Upon the ability to promptly recognize this disease and deal with it depends altogether the safety of the State and the prevention of epidemics of yellow fever in the future. I exceedingly regret the discussion of this matter in the daily press, although, as far as I am concerned, the discussion is all on one side. It settles nothing and proves nothing, for adherents and followers of the several physicians are never convinced. It has always been the case here that whenever yellow fever was recognized and announced, the medical man having the courage of his convictions to publicly make the statement was always (and I invite contradiction) vilified and traduced, contradicted, and denounced, not only by the citizens (all of whom claim expert ability), but also by many of his own profession.

In 1887 it was a Cuban physician who denied in the public press the existence of yellow fever on the island, and wrote sensational articles on the subject. This year the denial is repeated, and again by a Cuban physician. I do not wish to indulge in unkind or unjust strictures upon the members of my profession here of other nationalities; socially, they are pleasant, affable, courteous gentlemen, and conversant with the amenities of life, but there is a disposition with them, probably due to foreign birth and education, to accord very little of professional knowledge to the American doctor, and to claim a special "patent right" in the diagnosis of yellow fever. The custom, very prevalent in this place, of visiting the sick, commendable in some respects in the non-contagious disorders, is to be discountenanced and prohibited for a contagious sickness; no better way of scattering the poison of yellow fever can be found than frequent and promiscuous visiting of those so sick. Let a case be announced in this place as yellow fever by a medical man, the house is soon filled by men and women possessing not a scintilla of medical light, eager to express his or her opinion as to the correctness of what the doctor says, with a leaning always against his opinion, and only too willing, by argument, to attempt to disprove his judgment and to supplant it by his or her own. There are but few adults of either sex on this island above the age of fifteen years who do not claim to be experts in yellow fever, and to know more than the doctor. Of course, an order that prohibited this promiscuous visiting, and isolated stringently the patient, is denounced as an outrage, and the official who enforces it is cursed and silently and secretly threatened with violence.

Mr. Ellenger is doing very well, so his professional attendant informs me, and will recover.

The city commissioners have received reports from two engineers (which appearing in public print, I inclose) on the sanitary requirements of the island, and it is to be hoped work of some kind to better the health of the place will soon be commenced.

Key West is fast becoming a minature Havana, in nature of population and in the habits of the individual, and unless stringent health laws,

looking to cleanliness primarily, are enforced, and adequate facilities provided by the city government to effect this object, it will be but a year or two before the yellow fever germ, by occasional visitations, finds in the filth of the town a suitable nidus for the propagation and proliferation of the destructive elements of its nature, and acquiring citizenship on American soil permanently abides here; in other words, becomes endemic in Key West. As yet I have not been able to satisfy myself that the cases this year owed their origin to an imported germ.

Very truly,

JOSEPH Y. PORTER,
State Health Officer.

Dr. R. P. DANIEL,
President State Board of Health, Jacksonville, Fla.

INFECTED BALLAST—*South Atlantic Quarantine Station, Ga.*—Passed Assistant Surgeon J. H. White, U. S. Marine-Hospital Service, in charge of this station, reports as follows concerning the Spanish bark Gran Canaria, arrived from Havana October 25, 1889:

Condition of vessel, dirty; condition of cargo, suspicious; ballast being removed for disinfection. Two of the crew were sick at Havana with yellow fever, and were sent to the hospital as soon as the disease was discovered. The ballast is stone taken from just below Moro Castle, and from what I learn of that locality the dejecta from fever-stricken Spanish soldiers is poured out from the sewers of Moro upon this pile of stone. Under the circumstances I consider the vessel to be a fit subject for very careful work in the way of disinfection.

For previous notice of infected ballast taken by vessels at Havana from the same locality, see Abstracts No. 52, December 28, 1888, and No. 2, January 11, 1889.

SMALL POX—*Near Sandusky, Ohio (Pelee Island, Canada).*

U. S. MARINE-HOSPITAL SERVICE,
DISTRICT OF THE GREAT LAKES,
Port of Sandusky, Ohio, November 2, 1889.

SIR: In compliance with paragraph 94, Revised Regulations of U. S. Marine-Hospital Service, I have respectfully to report that there are 8 cases of small-pox at this date, on Pelee Island, Canada, 25 miles from this port. Steamboats near said island are freighted with fish taken by vessels which land at this port. The fish are disposed of here in the fish-houses, where they are salted and shipped to all parts of the country. There is a partial quarantine in operation at this port, caused by the mayor's enforcement of the municipal sanitary ordinances. On the aforesaid island is a population of 400, and in defiance of the quarantine regulations at said island persons from there are seen in this city, but thus far a strict watch for them has been maintained. I have been requested by the mayor to assist in the quarantine of this port against small-pox, but have deferred doing anything more than to give advice until instructions, if any, are received from yourself.

Very respectfully,

ELWOOD STANLEY,
A. A. Surgeon.

Surgeon-General J. B. HAMILTON,
Washington, D. C.

SMALL-POX.—*Liability incurred in its suppression.*—The Southern California Practitioner, for October, 1889, states:

A verdict of $7,000 and costs was rendered against Dr. Hagan, ex-health officer of the city of Los Angeles, for alleged malpractice in treating a small-pox patient at the city pest-house in January, 1888. The doctor is thus made to suffer because he did his duty in removing a patient to the small-pox hospital; and because the city did not furnish the best of accommodations, a jury is made to believe that a case of confluent small-pox would have recovered had it been allowed to remain and infect a thickly populated neighborhood.

It is understood that the case will be appealed to the Supreme Court.

Reports of States, and Yearly and Monthly Reports of Cities.

IOWA—*Keokuk.*—Month ended October 31, 1889. Population, 16,000. Total deaths 10; including diphtheritic croup, 1. *Cases of scarlet fever and diphtheria are reported and quarantined.* Since January 1, 1889, 50 cases of scarlet fever have been reported; cases occurred every month excepting September. During the same period there were 21 cases of diphtheria, the exempt months being May, June, and September.

KENTUCKY—*Louisville.*—Annual statement of mortality for the year ended August 31, 1889. Population, 227,000. Total deaths, 3,192; including diphtheria, 35; scarlet fever, 9; yellow fever, 2; small-pox, 2; typhoid fever, 144; consumption, 376.

MASSACHUSETTS—*Newton.*—Month of September, 1889. Population, 21,553. Total deaths, 23; diphtheria, 7; scarlet fever, 6; typhoid fever, 16.

The following notice has been published by the local board of health:

In view of the prevalence of typhoid fever, and malaria in its various forms, citizens are earnestly recommended to carry out the following: In a sick room use a 4-per-cent. solution of *fresh* chloride of lime; for all plumbing cleanse the pipes thoroughly by using potash or sal soda, and disinfect with a similar solution of choride of lime; for vaults and cess-pools, first use corrosive sublimate in solution 1 : 500, and then throw in chloride of lime in powder.

Board of health: WILLIAM S. FRENCH, *Clerk.*

MASSACHUSETTS.—*Annual Report of the State board of health for the year ended September* 30, 1888.—The report embraces the following topics: General work of the board; protection of the purity of inland waters; food and drug inspection; trichinosis; the opium habit; the health of towns; biological inquiries as to the quality of the air in hospital wards; and a summary of weekly mortality reports.

The whole number of deaths in a reporting population of about 1,100,000 for the year 1888 was 23,259. The months in which the greatest number of deaths were reported were August, January, and February, and those in which the least number were reported were June, November, and December.

The mortality statistics are those of a portion only of the State, the portion which makes no return consisting mainly of the smaller towns. The total number of deaths from consumption was 3,121; acute lung diseases, 2,833; typhoid fever, 482; diarrhœal diseases, 1,813; scarlet fever, 260; measles, 65; diphtheria and croup, 1,248; whooping-cough, 139; small-pox, 8.

MICHIGAN.—Week ended October 26, 1889. Reports to the State board of health, Lansing, from 53 observers indicate that measles, typhoid fever, diphtheria, erysipelas, inflammation of bowels, and inflammation of brain increased, and that pleuritis, cholera morbus, scarlet fever, and remittent fever decreased, in area of prevalence. The disease having the greatest area of prevalence was rheumatism.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Nov. 2	1,587,465	618	.....	.....	.....	.....	.....	.....	16	4	18	.....	6
Philadelphia, Pa.	Oct. 26	1,040,245	330	.....	.....	.....	.....	.....	.....	2	1	3	.....	1
Brooklyn, N. Y.	Oct. 26	843,602	308	.....	.....	.....	.....	.....	.....	6	2	17	.....	1
Brooklyn, N. Y.	Nov. 2	843,602	295	.....	.....	.....	.....	.....	.....	8	1	29	.....	1
Baltimore, Md.	Nov. 2	500,343	158	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	1
St. Louis, Mo.	Oct. 26	450,000	145	.....	.....	.....	.....	.....	.....	.....	4	6	.....	.....
St. Louis, Mo.	Nov. 2	450,000	154	.....	.....	.....	.....	.....	.....	1	4	12	.....	1
Boston, Mass.	Nov. 2	420,000	172	.....	.....	1	.....	.....	.....	3	1	11	.....	.....
San Francisco, Cal.	Oct. 25	330,000	119	.....	.....	.....	.....	.....	.....	4	1	2	.....	.....
Cincinnati, Ohio.	Nov. 2	325,000	115	.....	.....	.....	.....	.....	.....	.....	.....	14	.....	.....
New Orleans, La.	Oct. 26	254,000	99	.....	.....	.....	.....	.....	.....	1	.....	5	.....	1
Washington, D. C.	Oct. 26	250,000	94	.....	.....	.....	.....	.....	.....	3	.....	5	.....	.....
Washington, D. C.	Nov. 2	250,000	73	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Detroit, Mich.	Oct. 26	250,000	72	.....	.....	.....	.....	.....	.....	3	.....	2	.....	.....
Cleveland, Ohio.	Oct. 5	235,000	89	.....	.....	.....	.....	.....	.....	4	2	9	.....	.....
Cleveland, Ohio.	Oct. 12	235,000	110	.....	.....	.....	.....	.....	.....	6	.....	11	1	1
Pittsburgh, Pa.	Oct. 26	230,000	68	.....	.....	.....	.....	.....	.....	7	.....	8	.....	.....
Louisville, Ky.	Nov. 2	227,000	51	.....	.....	.....	.....	.....	.....	4	1	2	.....	.....
Minneapolis, Minn.	Nov. 2	200,000	47	.....	.....	.....	.....	.....	.....	3	1	8	.....	.....
Providence, R. I.	Nov. 2	127,000	37	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Indianapolis, Ind.	Nov. 1	124,450	22	.....	.....	.....	.....	.....	.....	4	.....	1	.....	.....
Richmond, Va.	Oct. 26	100,000	34	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Toledo, Ohio.	Nov. 1	89,000	23	.....	.....	.....	.....	.....	.....	1	.....	4	.....	.....
Fall River, Mass.	Nov. 2	69,000	29	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Nashville, Tenn.	Nov. 2	65,153	24	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Charleston, S. C.	Nov. 2	60,145	32	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Lynn, Mass.	Nov. 2	53,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Nov. 2	42,000	15	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Manchester, N. H.	Oct. 26	42,000	19	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Galveston, Tex.	Oct. 18	40,000	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Oct. 25	40,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	Oct. 28	32,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yonkers, N. Y.	Oct. 24	31,000	10	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Yonkers, N. Y.	Nov. 1	31,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Nov. 2	30,000	12	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Auburn, N. Y.	Oct. 26	26,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Nov. 2	26,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Nov. 2	25,000	7	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Newport, R. I.	Oct. 24	22,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Oct. 31	22,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Nov. 2	21,553	7	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Rock Island, Ill.	Oct. 27	16,000	5	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa.	Oct. 26	16,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended October 19 corresponded to an annual rate of 18.7 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Derby, viz, 13.2, and the highest in Preston, viz, 34.1 a thousand. Diphtheria caused 3 deaths in Salford, 3 in Sheffield, and 2 in Derby.

London.—One thousand four hundred and ten deaths were registered during the week, including measles, 23; scarlet fever, 25; diphtheria, 41; whooping-cough, 26; enteric fever, 11; diarrhœa and dysentery, 22; and not one from cholera or small-pox. The deaths from all causes corresponded to an annual rate of 16.9 a thousand. Diseases of the respiratory organs caused 300 deaths. In greater London 1,728 deaths were registered, corresponding to an annual rate of 16 a thousand of the population. In the "outer ring" the deaths included diarrhœa, 7; scarlet fever, 5; and diphtheria, 9.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended October 19, in the 16 principal town districts of Ireland, was 24.1 a thousand of the population. The lowest rate was recorded in Wexford, viz, 4.3, and the highest in Kilkenny, viz, 46.5 a thousand. In Dublin 179 deaths were registered, including measles, 2; enteric fever, 10; diarrhœa, 6; and scarlet fever, 1.

Scotland.—The deaths registered in 8 principal towns during the week ended October 19 corresponded to an annual rate of 20.5 a thousand of the population, which is estimated at 1,329,884. The lowest mortality was recorded in Paisley, viz, 14.9, and the highest in Glasgow, viz, 23.1 a thousand. The aggregate number of deaths registered from all causes was 524, including measles, 9; scarlet fever, 9; diphtheria, 6; whooping-cough, 11; fever, 11; and diarrhœa, 15.

CANADA—*Pelee Island, Lake Erie.*—For account of prevalence of small-pox, see domestic report, Sandusky, Ohio.

[Translated from the *Hamburgischer Correspondent.*]

SPAIN—SUSPECTED YELLOW FEVER IN VIGO.

MADRID, SPAIN, *September* 16, 1889.

The epidemic at Vigo is now thought to be stamped out. The Portuguese have abolished their quarantine measures, both land and maritime, leaving but a few mild restrictions in force. It will always

remain a question whether this was actually an epidemic of yellow fever. A very prominent physician of Madrid, a professor in the University, assured me that it was, and the Portuguese have declared likewise. The Spanish Government, however, says that it was not. Regarded as yellow fever the disease was not very malignant, yet nearly 1,000 persons, including the victims at Vigo and those of the neighboring coast-cities, were attacked, and 10 to 12 per cent. of these died, according to the official acknowledgment. Northerly winds (later than usual) and the cool weather have caused the fever to subside and gradually disappear. The great steamer lines, even the Spanish Compañia Transatlantica, all keep their ships distant from the Galician west coast, a measure of precaution which will be kept up for some time to come. This, and the sanitary campaign begun by Portugal, naturally caused considerable loss to the city of Vigo and to the entire Spanish commerce. In this fact may be seen the true reason why officially and in the Spanish press the existence of yellow fever in Vigo has been so persistently denied.

CUBA—*Havana.*—There were 9 deaths from yellow fever during the week ended October 25. The sanitary inspector U. S. Marine Hospital Service reports the sanitary condition of the port as good in the open bay, but suspicious at wharves on Havana side of harbor and in the city.

PERSIA.—*Proceedings of sanitary council in relation to the cholera.*

LEGATION OF THE UNITED STATES,
Teheran, September 17, 1889.

SIR: I have the honor to respectfully submit herewith, for your consideration, the copy of a report I have received from Dr. W. W. Torrence, of the proceedings of the last meeting of the sanitary council here, in relation to the cholera.

I am, etc.,

E. SPENCER PRATT.

Hon. JAMES G. BLAINE,
Secretary of State.

Transactions of sanitary council held in Teheran on September 10, *and submitted by Dr. W. W. Torrence to E. Spencer Pratt, United States minister, on September* 16, 1889.

It is reported that 4 Jews, natives of Bagdad, having avoided quarantine, have arrived at Kermanshah. They are closely confined and have been forbidden to go about.

Various information received from Khanakin regarding cholera is reported to have been without foundation and unofficial. Some objection being raised by the European physicians as to the reliability of this report, it was suggested that the Persian consul resident at Khanakin should be the proper informant.

The Turkish physician asked as to state of inhabitants of the country lying between Kerse-ih-Shirun and Khanakin; that they should be led to hope that something definite was being done for their relief; that it is necessary that four physicians be stationed each at Kerse-ih-

Shirun and Kermanshah, two to be engaged attending patients with cholera, and the other two to attend those suffering from other disorders, and perhaps one other to be engaged in superintending quarantine regulations.

A question having been asked by a European physician as to the measures being taken to remove bad odors, his excellency the Nasier el Malk, president of the council, replied that full regulations had been instituted formally for the carrying out of all that is necessary in that respect in quarantine.

The physicians said in reply that strict regulations were necessary and must be carried out wherever cholera exists; that most particular pains should be taken as regards cleanliness and removal of bad odors, the thorough cleansing of houses and thorough fumigation, and that those dying of cholera should be wrapped in cloths dipped in a proper solution of perchloride of mercury. His excellency, the president, replied that as regards cleanliness and fumigation such orders have, and will continue to be given, but that as regards burial and corpses nothing could be done contrary to the religion and custom of the country.

According to latest reports from Khanakin cholera has increased, and at Bundakauh and on the other side of river also; that it is very severe in the tribe Jof and on the increase, many dying daily; that the people are scattered.

In Khanakin, on the 17th of Moharum, 6 persons died of cholera, on the 18th 5. Apparently the disease is milder, but it is reported that the Gaiam-Migom has forbidden any one reporting the number of deaths.

CHOLERA IN MESOPOTAMIA.

First article.

[Translation from the *Revue Médico-Pharmaceutique*, Constantinople, August 31, 1889.]

On the 1st of August the Turkish sanitary administration received a telegram from its inspector at Bagdad, Dr. Lubicz, which conveyed information that a fatal disease had made great ravages at Nazriéh, a place having about 8,000 inhabitants, situated near the Euphrates, where it joins with the Chat-el-Haï, and that Dr. Gazala, the sanitary physician of Hillah, in Mesopotamia, had gone there to investigate its nature. The next day, August 2, a second telegram, also from Dr. Lubicz, signalized the presence of cholera at Chatra, a city of 4,000 inhabitants, on the north of Nazriéh. This disease had manifested itself since the 27th of July occasionally, up to the 2d of August, causing about 200 deaths. Upon the reception of this news the most rigorous methods were ordained by the sanitary administration. The Mesopotamian authorities were asked to establish, wherever it was necessary, cordons of isolation, and to proceed to the most active disinfection or destruction of infected houses, etc. At the same time Dr. Lubicz left Bagdad to give assistance on the lines where the epidemic was present. In the execution of these regulations they commenced to cut the communications on the Tigris at Kut-el-Amara, in order to preserve Bagdad, and on the Euphrates, from Samava, to protect the countries above this point. In addition the infected localities were rigorously disinfected. At Nazriéh Dr. Gazala recognized Asiatic cholera. All persons attacked by the epidemic presented the same symptoms, vomit-

ing, with profuse diarrhœa, rice-water dejections, with very low temperature, algid extremities, livid spots, cramps in the epigastrium and in the muscles, thread-like pulse, nearly imperceptible, and dry white tongue, yellow at the border, with anuria. Death occurred in six, twelve, and forty-eight hours. From the 1st to the 6th of August, at Nazriéh, cholera followed the characteristic ascending progression, 2, 7, 13, 21, 32, 37. Thus, to the 6th of August the zone of the disease remained limited to the localities of Chatra and Nazriéh, but it was evident to all attentive observers, familiar with the ordinary march of cholera, that the epidemic would pass the barriers by which they sought to oppose it, and enter the great plane of lower Mesopotamia, which is one of the regions where the disease is endemic, and on that date cholera was seen at Bassora in a curious fashion. A young woman, twenty years of age, arrived, after spending some days at Filiéh, a place in Persia, near Mohamara, and she was seized on the 5th of August with vomiting and choleraic diarrhœa. The next morning she died. We are assured that this was the first case. At any rate, it was on the 7th of August that a new death was announced. The following day the epidemic began its ascending march. At Nazriéh the situation was aggravated, while at Chatra the mortality was considerably abated. In the first of these two localities the cholera arrived at its apogee on the 8th of August with 85 deaths. On the next day the ascertained number of deaths declined to 248. The most active measures were taken. The huts which in great part compose the city of Nazriéh were burned, and the habitations, which were constructed of brick and stone, were disinfected. The people were turned out in camps near the village, and habitations were improvised by the local authorities for their need. At the meeting of the 8th of August the superior council of health prescribed the following measures:

"The productions of Bassora are subjected to ten days' quarantine for those sent out from the 5th day of August, inclusive, in one of the lazaretto ports of the Turkish coast. In addition, a sanitary cordon is established against the infected localities in Mesopotamia, and communications on the Tigris between Bassora and Bagdad are provisionally interrupted until the establishment on the river of a quarantine station, where productions destined to Bagdad shall be subjected to an observation of ten days with transshipment."

From the 8th to the 13th of August the epidemic was propagated notwithstanding the station which had been established at Kut-el-Amara. On the 8th of August the cholera appeared at Réméyta, a market village of about three hundred families, five hours from Samava, on the Euphrates. On the 12th the disease had progressed to Chouq-el-Chouq, still on the Euphrates but to the southeast, and at last, on the 13th, Hamar and Kourna, at the point of junction of the two rivers, were infected. From the 10th to the 15th of August, Réméyta lost 76 inhabitants; at the same time Chouq-el-Chouq, on the 13th, had 31 deaths. At Nasriéh, where the first case had appeared fifteen days before, Dr. Lubicz arrived on the 13th of August; on his side Dr. Gazala stated the presence of cholera in the tribes to the northwest of Detcha near Chatra, and gave to the flames 700 infected huts. In the space of two weeks the epidemic was propagated over considerable space. It extended along the Euphrates and the Chat-el-Arab from Réméyta to Kourna, and even to Bassora. The region of the Chat-el-Haï was equally infected. The 14th of August was an ill-omened day. The cholera manifested itself unexpectedly at Bagdad, bounding by

the last quarantine station, Kut-el-Amara. The first case was stated by Dr. Adler, who temporarily supplied the place of Sanitary Inspector Lubicz. The case was that of a soldier who, up to the 12th of August, had been in good health. On the 13th he was taken with vomiting and diarrhœa, was taken to hospital. and after six hours was dead. The sanitary measures were then re-enforced; a second cordon was established at a greater distance from the infected localities, thus maintaining them in a state of almost absolute isolation. Recourse was had to every practice of cleanliness and public hygiene which could be thought of at this time of public calamity. Everywhere reigned desolation, for day by day the mortality increased. If there were some localities where the number of deaths diminished, the proportion of deaths to the whole population was not modified. On the contrary, at Bassora the panic was at its height. The inhabitants abandoned the city *en masse*. The sanitary physicians, Lubicz and Gazala, were everywhere. A cordon of defense was established across Mesopotamia, with stations at Kut-el-Amara on the Tigris, at Mahava and Mussayeb on the Euphrates. At the meeting of the 15th of August the superior council of health approved of all the measures which had been taken. The quarantine against the river communication and by roadways was carried from ten to fifteen days, cordons of isolation were re-enforced, and a cordon of observation established to the north of Bagdad from Tékrit to Saklavieh. In the second fortnight of August cholera increased, following a line of march more rapid and aggressive.

Having taken new force at Bagdad, where, from the 17th to the 26th, it mowed down 537 victims, having always maintained itself victoriously in all localities where it had manifested itself up to that time, it was announced at Fâo, where the sanitary officer, Eugene Coïdan, died a victim to his duty; then, on August 18, in the city of Kut-el-Amara, where, as we said above, a sanitary station had been established, having contained 800 quarantine inmates at the moment cholera manifested itself. On the other side it ascended the Euphrates towards Hillah. Dr. Gazala, having arrived August 19 at Samava, found it in the huts of the Arabs in the surroundings of Réméyta.

On August 18 a "cordon of repulsion" was established on the north and west of Bagdad, Kifrï (Salahieh), Tekrit, and Saklavieh. On the other side barracks were established on the Diala, a tributary of the Tigris, about three hours distance below Bagdad, in order to serve as a hospital.

In its session of August 20, the superior health council ordered the cordon of Saklavieh-Tekrit-Kifrï to be re-enforced. Rigorous measures were prescribed in order to keep the country immune on the side of Nedjef, Divaniah, Hillah, and Kerbella. A cordon was likewise established on the south of Bassora against the productions of this city on the side of Fâo. The quarantine station at Kut-el-Amara was suppressed. The maritime productions of the Persian Gulf were subjected to the same quarantine rule as those of Bassora.

From August 20 to 27 cholera continued its sinister march. A slight decrease was signalized in southern Mesopotomia, but the regions in the north, west, and east were progressively infected. The epidemic seemed to spread itself like a fan over the Euphrates, the Tigris, and the Diala, a tributary of the latter. On August 20 cholera was announced at Mussayeb, on the Euphrates, to the north of Hillah. From August 23 to 24 it was developed in the entire Ottoman basin of the Diala, at Kiasmieh, Bacouba, Kyzylrobat, as far as Hanéguine.

The city of Bagdad was in desolation. A great panic reigned there. The inhabitants had left, some were camping in the surroundings whilst others were taking refuge to the north. On August 25,100 deaths were counted at Bagdad, 93 of which were from cholera. Mortality at Bassora showed a tendency to diminish; on August 26 it fell to 8 deaths; unfortunately this decrease could partly be attributed to emigration.

Organization of defense cordons and sanitary stations did not happen to march as rapidly as the epidemic. Hardly was a cordon established, a quarantine station installed, when cholera went beyond them and was found on the other side pursuing its march. Thus the barracks of the Diala had been of no use, the epidemic having passed over, continuing its route as far as Hanéguine.

At the hour we are writing, on the 31st, in the evening, the epidemic, having already raged at Bouchir, on the Gulf of Persia, is extending over all Chat-el-Arab, as also in the regions along the Tigris from Kourna to Bagdad, then to the east as far as Mendehli and Kiazmié on one side and to Hanéguine on the other side; on the Euphrates cholera had gained the countries from Kourna to Sahlavié and threatened Ramadi.

Consequently, the western station of the "repulsion-cordon" was carried from Saklavieh to Hith, and the outline of this cordon was modified so as to form a circular line commencing on the Diala to the Turco-Persian frontier, passing through Kifrï, Touzchourmati, Tekrit, and coming out at Hith on the Euphrates.

A second "observation-cordon" will be established farther toward the north, through the country to the north of Suleïmanié, continuing through Altynkeupru, the small Zâb (tributary of the Tigris), and ending at Deïr, on the Euphrates.

The following is the summary of a statistical table of cholera in the different localities where it manifested itself from July 27 to August 27. It is useless to forewarn our readers that the numbers of this table are approximate, and that, in order to arrive at the exact figures, 50 per cent. should be added over and above.

Place.	Date.		Deaths.
	From—	To—	
Chatra	July 27	August 18	345
Nazrieh	July 1	August 24	471
Bassora	July 6	August 26	394
Réméyta	July 8	August 18	82
Chouq-el-Chouq	July 12	August 22	103
Hamar	July 13	August 15	6
Kourna	July —	August 13	3
Bagdad	July 14	August 26	541
Fâo	July 18	August 26	4
Musseyeb	July 20	August 21	4
Beïda	July —	August 20	15
Kut-el-Amara	July —	August 21	2
Samava	July 21	August 23	3
Hay	July 22	August 23	5
Touradje	July —	August 23	8
Kyzirobat	July —	August 23	1
Hanéguine	July —	August 23	1
Medhatié	July —	August 23	1
Kiazmieh	July 23	August 25	7
Bakauba	July —	August 18	8
Total August 27			2,003

CHOLERA IN MESOPOTAMIA.

Second article.

[From the *Revue-Medico-Pharmaceutique*, Constantinople, Sept. 30, 1889.—Translation.]

In our preceding article we traced the line of march of cholera from its first appearance, about July 27, to the latter part of August. We noted its progress successively from Chatra, Nazriéh, Bassora, and Fâo to Bagdad and beyond; on the side of the Euphrates to Saklavieh, Felandja, and in the direction of the Persian frontier towards Kiazmieh, Mendelé, and Hanéguine. Finally we pointed out the measures of defense adopted: (1) A cordon of defense by Couheïssa, Hith, Tekrit, Touz, Kourmati, Kifrï (Selahieh), and the Persian frontier. (2) A cordon of observation by Deir on the Euphrates, El Hamr on the Tigris, Altin-Keupru, Keuy-Sandjak, and Babaderbent (the basin of the Little Zab).

The epidemic then continued its progress:

(1) On the Euphrates it extended towards the northwest, to Ramadi (September 7), then to the quarantine stations of the Hith and Caubeïssa (September 20). Moreover, a cholera focus formed in the important group of localities extending along and to the northwest of the Euphrates between the 31st and 32d parallels of north latitude, and comprising, from the southeast to the northwest, the towns of Samava, Chenafieh, Nedjef, Koufa, Hindieh, Hillah (Babylon), Kerbela, and Musseyeb. The Mouharem pilgrimage having unfortunately coincided with the appearance of cholera, the epidemic made serious ravages throughout this region, visiting not only the towns, but also the Arab tribes (Chamieh, etc.) who live there crowded in unclean huts. On information received at Constantinople, more than 1,400 deaths were noted in the region in question from August 10 to September 20.

(2) In the city of Bagdad the cholera, which had attained its maximum, August 26, with 93 deaths, considerably abated. In the latest report, from September 17 to September 26, the number of deaths from cholera oscillated between 2 and 3 a day. If, on the other hand, we add the daily figures furnished from Bagdad from August 14, the day of the appearance of the epidemic, to September 26, we obtain a total of about 1,000 deaths.

(3) Along the Tigris, above Bagdad, cholera manifested itself, August 29, at Isnam-Azam, a suburb of Bagdad; later, on September 16, at the quarantine station of Tekrit 2 deaths were reported.

(4) Between the Tigris and the Persian frontier, from the basin of the Diala, the basins of the Adhim and the Little and the Great Zab were in turn contaminated. In spite of the cordon of repulse established in the latter part of August by Tekrit, Kifrï (Selahieh), and the frontier, from the 2d of September, cholera appeared at Tissyner, a locality situated in the environs of Kerkouk, a very important town from which a number of routes radiate. Again, cholera manifested itself beyond the barriers designed to oppose its march. Two days later, September 4, the epidemic showed itself at Selahieh (Kifrï), a quarantine station, where, from September 4 to 24, it made 143 victims. Encountering a well-watered country and a dense population, two conditions favorable to its development, the cholera extended in every direction, visiting, by preference, populous towns and quaran-

tine stations. At Kerkouk the epidemic showed itself September 7, carrying away 385 persons in the short space of eighteen days. Thence it was reported at Terdjil, Zenghiné, Laouk, in the stations of Laerz-Khourmati, Yenidge-Altin, Keupru, Tchmetchémal, and, finally, September 16, in the environs of Rechvan, on the Great Zab, a little way to the east of Mossoul, and, on September 20, at Suleïmanieh, an important center, for the protection of which all the means indicated had been employed.

(5) In the Chat-el-Arab, the lower Tigris, from Kourna to Bagdad and the basin of the Diala, cholera still shows itself, but it has considerably abated. The only localities where it continues are Kiazimieh, on the frontier, where, from August 23 to September 26, 218 deaths were counted, and Amara, on the Tigris, which, in the space of twenty-four days (September 2 to 25), lost 230 inhabitants. At Nazriéh and at Bassora, isolated cases. At Chatra, the primitive focus, the epidemic seems to have ceased completely after August 16.

To sum up, this is the situation at the present time. Considerable amelioration in the basins of the Chat-el-Arab, the lower Tigris, and the Diala. Bagdad doing well. Two foci in full activity: (1) The group of towns to the west of the lower Euphrates, from Samava to Musseyeb, and (2) the basin of the Adhim and the Little Zab, on the side of the frontier, with Kerkouk as chief nucleus. Cholera has broken out, also, at Suleïmanieh and in the environs of Rechvan.

The number of choleraic deaths registered from the beginning of the epidemic to September 26 reached 6,173.

With regard to measures of defense, the cordons cited at the commencement of this article, and another cordon established by Altin-Keupru, Bubau, Kafar, Ali Tchemtchémal, and the frontier, for the protection of Suleïmanieh, have been suppressed. At the present time an attempt is being made to restrict the cholera by a very extended cordon, passing by Deïr on the Euphrates, Chedadieh on the Kabour, Tel-Kavkoub, Sindjar, Tel-Afar, in the plain of upper Mesopotamia, Ali Hamman on the Tigris, Kelek, Herir, and the course of the Great Zab. Stations have been established also at Amadieh and Zakko, to the north of Mossoul, and a third and last arrests the circulation at Djéziret, Midiat, and Mardin. The object of these measures is to protect Mossoul, and, in event of failure, Diarbekir.

Outside of Mesopotamia cholera manifested itself at Kouthe, a port on the Arabic coast of Nedjid, on the Persian Gulf. It has also been observed at many points in Persia; in the basin of the Karoum, an affluent of the Chat-el-Arab, from Mohamara to Ahvaz and Chouchter; in the district of Haouizieh, near the Ottoman frontier, towards Amara; and, finally, in a series of villages comprised between Kermanchah and the frontier on the side of Hanéguine.

In concluding our second article on cholera, we are pleased to acknowledge the zealous efforts displayed on all sides to arrest the progress of the epidemic. The authorities and functionaries rivaled each other in their obedience to supreme commands. We must specially cite the efforts of the superior council of health and the sanitary administration, under the intelligent direction of which protective measures were taken. The conduct of the sanitary physicians is worthy of the highest eulogium. We hope that our next article, a month hence, will give our readers better tidings.

We repeat here what we said in our preceding article, that the numbers given in the following table are approximate, and that, in order to be correct, they should be increased.

Recapitulatory table of cholera mortality in Mesopotamia, from July 27 to September 26, 1889.

Place.	Date.		Deaths.
	From—	To—	
Chatra	July 27	August 16	345
Nazriéh	August 1	September 15	486
Bassora	August 6	September 23	450
Réméyta	August 8	August 18	82
Chouq-el-Chouq	August 12	August 31	96
Hamar	August 13	September 17	7
Kourna	August 13		3
Bagdad	August 14	September 26	924
Fâo	August 18	August 29	5
Musseyeb	August 20	September 6	28
Beïda	August 20		15
Kut-el-Amara	August 21	September 2	3
Samava	August 21	September 25	76
Hai	August 22	August 23	5
Kiazimieh	August 23	September 25	218
Touradjé	August 23		8
Hanéguine	August 23	September 26	53
Kizilrobad	August 23	September 14	9
Midhatié	August 23		1
Chamié (tribes and city)	August 23	September 23	381
Djehora	August 24	September 13	325
Bacouba	August 24	September 26	23
Mendéli	August 26	September 24	99
Between Samava and Divanié (tribes)	August 26	September 10	400
Saklavieh-Felaudja	August 28		10
Imam-Azam	August 29	September 6	20
Kerbela	August 31	September 26	343
Ali-Garbi	September 2	September 6	40
Hindieh	September 2	September 6	8
Amara	September 2	September 25	230
Tissgine	September 2	September 14	56
Horelduhn	September 2	September 16	78
Madéker-Kébir	September 2	September 10	217
Selahieh (Kifri)	September 4	September 24	143
Koufa	September 4		3
Djezan	September 6		6
Chénafieh	September 6	September 13	41
Melha	September 7	September 15	16
Hillah	September 7	September 26	106
Rumâdi	September 7		2
Nedjef	September 7	September 18	68
Kerkauk	September 7	September 26	385
Zenghiné	September 9		1
Terdjel	September 10		2
Tchehala (moukata)	September 10	September 19	237
Iskendérié	September 11		7
Djerboïa	September 12		14
Chafié	September 12		9
Tauz Khourmati	September 12	September 19	8
Yénidjé	September 12	September 23	14
Medjer-Sgaïr	September 14		10
Tekrit	September 16		2
Tadjarik	September 16		6
Altin-Keupru	September 16	September 25	2
Rechvan (environs)	September 16		4
Taouk	September 17	September 18	7
Gaïlan	September 17	September 19	9
Tchemtchémal	September 20		2
Suleïmanieh	September 20	September 26	17
Maté, near Melha	September 23		6
Bédra	September 23		3
Zorbatia	September 23		2
Zobeïr	September 25		5
Total			6,173

[From the *Journal d'Hygiene*, October 24, 1889—Translation.]

CHOLERA IN MESOPOTAMIA AND IN PERSIA.

[Letter from Dr. Gabuzzi, dated Constantinople, October 16, 1889.]

The decadence of cholera in Mesopotamia is affirmed. The bulletins of the week report 148 deaths, while no new locality has been infected outside of the epidemic zone.

The news which reaches us from Persia is alarming. There is a great panic at Kermanshah, where the frightened population abandoned the city *en masse;* and since the 30th of September there have been registered 290 deaths. To add to their calamities, a fatal bovine epizoöty is announced at Terpoul; a defensive cordon is established at Bana, Sacchis, and Murivan. It seems established that the cholera in Persia was transported from Bassora to Bouchir.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Oct. 19	5,642,015	1,728	.....	.....	.....	.....	11	30	50	24	.....
Paris	Oct. 19	2,260,945	867	.....	.....	1	.....	13	2	25	3	8
Glasgow	Oct. 19	545,678	235	.....	.....	.....	4	.....	2	4	.....	.....
Warsaw	Oct. 12	445,770	296	.....	.....	52	.....	.....	14	12	.....	.....
Calcutta	Sept. 21	433,219	219	5	.....	.....	.....	.....	.....	.....	.....	.....
Amsterdam	Oct. 19	399,051	157	.....	.....	.....	.....	1	.....	7	.....	.....
Rome	Aug. 31	300,467	155	.....	.....	2	.....	4	.....	.....	.....	.....
Rome	Sept. 7	300,467	181	.....	.....	1	.....	.....	.....	10	.....	.....
Munich	Sept. 21	281,000	155	.....	.....	.....	.....	.....	4	.....	.....	.....
Munich	Sept. 28	281,000	137	.....	.....	.....	.....	.....	.....	7	.....	.....
Munich	Oct. 5	281,000	.....	.....	.....	.....	.....	1	3	3	.....	.....
Munich	Oct. 12	281,000	131	.....	.....	.....	.....	1	2	7	.....	.....
Palermo	Oct. 19	250,000	79	.....	.....	.....	.....	.....	2	.....	.....	.....
Belfast	Oct. 19	229,622	118	.....	.....	.....	.....	5	1	.....	.....	.....
Bristol	Oct. 19	229,361	91	.....	.....	.....	.....	.....	1	.....	.....	.....
Genoa	Oct. 19	180,371	77	.....	.....	.....	1	.....	.....	1	.....	.....
Toronto	Oct. 26	175,000	49	.....	.....	.....	.....	3	.....	.....	.....	.....
Maceio	Sept. 30	170,000	55	.....	.....	15	.....	.....	.....	.....	.....	.....
Trieste	Oct. 12	154,500	77	.....	.....	1	.....	.....	.....	1	.....	.....
Rotterdam	Oct. 21	148,102	67	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stuttgart	Oct. 19	125,510	40	.....	.....	.....	.....	.....	.....	2	.....	.....
Pernambuco	Oct. 1	120,000	83	.....	.....	.....	1	2	1	.....	.....	.....
Pernambuco	Oct. 8	120,000	74	.....	.....	.....	.....	.....	1	.....	.....	.....
Barmen	Oct. 12	109,000	38	.....	.....	.....	1	.....	.....	1	.....	.....
Rheims	Oct. 19	98,083	42	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leghorn	Oct. 20	94,423	41	.....	.....	.....	.....	1	.....	.....	.....	.....
Cadiz	Oct. 20	57,157	36	.....	.....	.....	.....	.....	.....	.....	.....	.....
Georgetown, Dem	Oct. 2	56,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Georgetown, Dem	Oct. 9	56,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Oct. 14	47,448	51	.....	.....	.....	.....	.....	.....	1	.....	.....
Merida	Oct. 21	47,448	41	.....	.....	.....	.....	.....	.....	1	.....	.....
Cienfuegos	Oct. 14	40,655	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Oct. 24	23,800	29	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Oct. 25	18,284	39	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Sept. 20	15,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Sept. 27	15,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Oct. 4	15,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Oct. 11	15,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Oct. 18	15,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Oct. 12	7,428	5	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Oct. 19	7,428	9	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 46. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., November 15, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended November 15, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.

UNITED STATES.

STATE QUARANTINE RESTRICTIONS—*Removal of, at Key West, Fla.*—

BULLETIN NO. 4, STATE BOARD OF HEALTH OF FLORIDA.

OFFICE OF STATE HEALTH OFFICER,
Key West, Fla., November 11, 1889.

The restrictions and surveillance on travel from this place to the main-land, Florida, or settlements on the adjacent keys, instituted by the State board of health on October 10 and again on October 31, are removed.

Household effects, such as furniture, bedding, and carpets, are forbidden by the State board of health to be transported from Key West to the main-land of Florida, until after the close of the quarantine season, viz., December 1.

* * * * * * * *

Every effort to discover possible connection between the Ellinger case and the Householder or peddler cases has been made, but with negative result; and therefore Mr. Ellinger either imbibed the poison in Havana, which if the case had a period of incubation of twenty-eight days before exploding, or he contracted the fever here from a source entirely distinct from that which acted as the infecting cause to the four previously reported cases.

It is a matter of impossibility to state accurately where the disease was contracted by him, and can only be a matter for "surmise."

Mr. Ellinger has recovered and was discharged well on the thirteenth day from his seizure. His apartments have been thoroughly disinfected by germicides, and the disinfected bedding has been destroyed. It is now twenty-four days since his seizure and eleven days since he was discharged, well. There have been no other cases discovered.

The sea-ports of the State of Florida will raise quarantine restrictions against the port of Key West, and will give pratique to all vessels arriving therefrom.

JOSEPH Y. PORTER,
State Health Officer.

Special Reports.

QUARANTINE SITE, SAN DIEGO, CAL.—The Secretary of War, under date of November 8, 1889, has informed the Secretary of the Treas.

ury that the last site selected for a quarantine at San Diego, being on the military reservation, can not be transferred without prejudice to the interests of that Department. An artificial island is suggested, similar to that at New York, to be constructed at some of the shoals on the east side of the channel bearing east or southeast from La Playa, or on the shoals northeast of La Playa on the west side of the channel.

As such a site would be more costly than one on the main-land, an additional appropriation must be asked from Congress.

LEPROSY IN MINNESOTA.

[From the official publication of the State board of health.]

OCTOBER 10, 1889.

At the request of the secretary, Dr. Gronvold, formerly a member of the State board of health, and its standing committee on leprosy, has furnished a résumé of the cases in Minnesota, at that date, as far as known to him, which we print below:

	Name.	Sex.	Age in 1889.	How long leper.	How long in Am'rica.	Form of disease.	Children.
1	O. H.....	Male.....	73 years	16 years	23 years	Anæsth.....	Many, all well.
2	E. A.....	.....do	35 years	13 years	26 years	Tubercular.....	Unmarried.
3	J. S.....	.....do	59 years	20 years	15 years	Anæsth.....	No children living.
4	T. N ...	.....do	41 years	22 years	18 years	Anæsth.....	Children well.
5	N. B....	.....do	40 years	11 years	10 years	Anæsth.....	Unmarried.
6	H. L ...	.....do	*70 years	†22 years	22 years	Anæsth.....	No children living.
7	C. K ...	.....do	47 years	17 years	17 years	Tubercular.	

*Probably about. †More than.

Of these, the three first-named of whom I have heard recently, do not seem to be much affected. The fourth has been reported last year to be quite well. The fifth worse, but contemplated going back to the old country, after what last heard from him. The sixth and seventh are probably comparatively well, and the disease does not seem to have made any progress lately, according to last returns. No. 6 was, two years ago, reported as suffering from atrophies, contractures, and anæsthesies as usual in chronic cases.

Reports of States, and Yearly and Monthly Reports of Cities.

COLORADO—*Denver.*—Month of October, 1889. Estimated population 100,000. Total number of deaths 187; including diphtheria, 7; typhoid fever, 55; whooping-cough, 1; pleurisy, 1; pleuro-pneumonia, pleurisy, and pneumonia, 8; pneumonia, none. Total deaths from phthisis pulmonalis 34; of which number 24 were contracted East; 3 contracted West; 4 contracted in Colorado; and 3 in locality not stated.

GEORGIA—*Savannah.*—Month of October, 1889. Estimated population, 57,000—whites, 32,000; colored, 25,000. Total deaths, 105—whites, 42; colored, 63. Three deaths from membranous croup; 4 from congestive fever, and 5 from remittent and intermittent fevers.

ILLINOIS—*Chicago.*—Month of October, 1889. Population, 1,100,000. Total deaths, 1,583; including diphtheria, 132; scarlet fever, 13; croup, 67; measles, 1; and whooping-cough, 7.

Galesburgh.—Month of October, 1889. Estimated population, 17,000. Total deaths, 12. Four cases of scarlet fever were reported.

IOWA—*Keokuk.*—Year ended October 31, 1889. Population, 16,000. Total deaths, 192; including diphtheria, 5; measles, 4; scarlet fever, 1. *Cases of scarlet fever and diphtheria are quarantined.* "When cases have been reported strict quarantine is enjoined, and with the hearty co-operation of physicians it is fairly enforced, but the urgent necessity of a scrupulous regard to these regulations of the board is not clearly understood by the public."

KENTUCKY—*Louisville.*—Month of October, 1889 (ending November 2). Population, 227,000. Total deaths, 257; including diphtheria, 3; scarlet fever, 4; typhoid fever, 21.

MASSACHUSETTS—*Fall River.*—Month of October, 1889. Estimated population, 69,000. Total number of deaths, 113; including scarlet fever, 1; whooping-cough, 2; typhoid fever, 8. There were 45 cases of contagious diseases reported, viz, diphtheria, 3; scarlet fever, 3; typhoid fever, 39.

Worcester.—Month of October, 1889. Population, January 1, 1889, 82,000. Total deaths, 104, including typhoid fever, 10; and membranous croup, 3. There were 8 cases of diphtheria, 3 of scarlet fever, and 29 of typhoid fever during the month. "Fewer cases of contagious diseases this month than at any time for last two years."

MICHIGAN.—Month of October, 1889. Number of reports received for the month, 265. The disease having the greatest area of prevalence was rheumatism.

Including reports by regular observers and others, diphtheria was reported present in Michigan in the month of October, 1889, at 63 places, scarlet fever at 54 places, typhoid fever at 113 places, and measles at 15 places.

Reports from all sources show diphtheria reported at 29 places more, scarlet fever at 34 places more, typhoid fever at 66 places more, and measles at 8 places more in the month of October, 1889, than in the preceding month.

Week ended November 2d. Reports to the State board of health, Lansing, from 45 observers in different parts of the State, for the week, indicate that scarlet fever, pleuritis, and pneumonia increased, and that cerebro-spinal meningitis, cholera infantum, dysentery, inflammation of brain, measles, puerperal fever, diphtheria, membranous croup, inflammation of bowels, typhoid fever, typhoid malarial fever, and whooping-cough decreased, in area of prevalence.

Grand Rapids.—Month of October, 1889. Population, (Census, 1887), 70,000. Total number of deaths, 84; including diphtheria, 17; typhoid fever, 11.

MINNESOTA—Month of September, 1889.

Infectious diseases reported during the month.

Diseases of men.—Diphtheria, 38 cases, 15 deaths; scarlatina, 18 cases, no deaths.

Diseases of animals.—Cases of glanders remaining isolated or not accounted for, 15; reported during the month, 12; killed, 5; released, 5; isolated, 5. Remaining October 1, 1889, isolated or not accounted for, 17.

Specified diseases for the month of September, 1889, as reported up to October 20.

(Population estimated 1889, cities over 2,000 inhabitants, 539,000; towns and villages, 1,047,860.)

Total number of deaths, 913; 56.3 per cent. occurred in cities over 2,000 population.

Measles.—No deaths from this disease reported.

Scarlatina.—11 deaths, in 8 localities, 8 counties; 63 per cent. occurred in cities. Mortality less than last month, but distribution the same. Much greater than for same month last year.

Diphtheria.—30 deaths, in 15 localities, 13 counties; 60 per cent. occurred in cities. A slight increase in mortality and distribution compared with last month, but less than one-half compared with same month last year.

Croup.—9 deaths, in 6 localities, 6 counties; 55 per cent. occurred in cities. An increase in mortality and distribution compared with last month, but less than for same month last year.

Typhoid fever.—57 deaths, in 20 localities, 20 counties; 77.2 per cent. occurred in cities. A continued increase, as expected, in mortality and distribution, but much less than for same month last year.

For report of leprosy, see Special Reports.

MISSOURI—*St. Louis.*—Month of October, 1889. Estimated population, 450,000. Total number of deaths, 667; including scarlatina, 21; diphtheria, 37; croup, 10; typhoid fever, 19; whooping-cough, 1.

The following table is published by the health department:

Comparative mortality of ten cities, 3d quarter, 1889, and deaths from the seven principal zymotic diseases.

	Estimated population.	Total deaths.	Annual rate per 1,000.	Measles.	Scarlatina.	Diphtheria.	Whooping-cough.	Typhoid fever.	Diarrhœal diseases.
Baltimore	500,343	2,616	20.92	1	16	16	10	60	778
Boston	420,000	2,766	26.34	3	1	111	37	74	588
Brooklyn	821,525	4,839	23.60	9	28	173	55	61	972
Chicago	1,100,000	5,511	20.04	34	37	191	25	148	1,620
Cincinnati	325,000	1,529	19.11	45	7	86	6	40	192
New Orleans	254,000	1,512	25.19	7	1	37	4	8	157
New York	1,571,300	10,551	27.51	28	50	253	162	154	2,552
Philadelphia	1,040,245	5,610	21.57	18	43	54	45	215	816
San Francisco	330,000	1,304	15.80	1	4	21	.....	33	65
St. Louis	450,000	2,041	18.14	1	17	52	11	52	243

Kansas City.—In the report for the week ended November 2, 1889, it is stated that there are about 80 cases of scarlet fever (mild) in the city, and 20 cases of malignant diphtheria.

NEW JERSEY—*Jersey City.*—Month of September, 1889. Estimated population, 179,745. Total deaths, 311; including scarlet fever, 2; diphtheria, 12; typhoid fever, 7; whooping-cough, 6.

Hoboken.—Month of September, 1889. Estimated population, 43,097. Total deaths, 85; including measles, 1; diphtheria, 13; typhoid fever, 3; whooping-cough, 1.

NEW YORK.—The monthly bulletin of the State board of health for September contains reports from 8 districts, with enumeration of 128 cities and towns, which latter have a sum total population of 2,986,860. The total deaths reported are 8,264 in the 8 districts, but the total population of the 8 districts is not given. During the month in the 8 districts there were 2 deaths from small-pox; 9 from measles; 53 from scarlet fever; 343 from croup and diphtheria, and 90 from whooping-cough.

Rochester.—Month of October, 1889. Estimated population, 130,000. Total number of deaths, 154; including diphtheria, 2; typhoid fever, 8, and whooping-cough, 1.

NORTH CAROLINA.—The official bulletin of the State board of health contains the following "Summary of mortuary statistics from towns for September, 1889:" Aggregate population, white, 66,385; colored, 55,315; total, 121,700. Aggregate deaths, white, 73; colored, 113; total, 186. The deaths include typhoid fever, 9; diphtheria, 3; and whooping-cough, 2.

The bulletin contains special reports from 59 of the 96 counties of the State. Twenty counties have no board of health. Seventeen counties were not reported upon by their health officers, viz: Alexander, Alleghany, Beaufort, Bertie, Camden, Cherokee, Cleveland, Haywood, Martin, Pender, Person, Rockingham, Washington, Wayne, Wilkes, Wilson, and Yadkin.

The bulletin contains the following:

SCARLET FEVER MUST BE QUARANTINED.

For the past few months scattering cases of scarlet fever have been reported. We would remind the superintendents of health that it is a disease which should be quarantined against, and we invite their attention to an article in this issue giving means for preventing the spread of scarlet fever and diphtheria, and commend it to their careful perusal.

In section 9 of this act creating the board code of 1885, inland quarantine is defined as follows:

"SEC. 9. Inland quarantine shall be under the control of the county superintendent of health, who, acting by the advice of the local board, shall see that diseases dangerous to the public health, viz, small-pox, scarlet fever, yellow fever, and cholera, shall be properly quarantined or isolated at the expense of the city, or town, or county, in which they occur. Any person violating the rules promulgated on this subject shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined or imprisoned at the discretion of the court. In case the offender be stricken with disease for which he is quarantinable, he will be subject to the penalty on recovery, unless in the opinion of the superintendent it should be omitted. Quarantine of ports shall not be interfered with, but the officers of the local and State boards shall render all the aid in their power to quarantine officers in the discharge of their duties, upon the request of the latter."

PENNSYLVANIA—*York.*—Months of July, August, and September, 1889. Estimated population (1887), 20,545. Total deaths during the three months, 84; including diphtheria, 10; scarlet fever, 1.

Williamsport.—Month of October, 1889. Estimated population, 35,271. Total deaths, 19; including typhoid fever, 1. "The city is in a good sanitary condition."

TENNESSEE—*Chattanooga.*—Month of October, 1889. Estimated population, white, 27,000; colored, 13,000; total, 40,000. Total deaths, 31; including, diphtheria, 1; typhoid fever, 1.

TEXAS—*San Antonio.*—Month of October, 1889. Estimated population, 50,000. Total deaths, 70; including croup, 1; diphtheria, 1.

VIRGINIA—*Lynchburg.*—Month of October, 1889. Estimated population, 24,000. Total deaths not given. Typhoid fever, 2 cases.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Nov. 9	1,588,363	615	.....	.....	.....	.....	.....	.....	8	2	15	4	5
Philadelphia, Pa.	Nov. 2	1,040,245	399	.....	.....	.....	.....	.....	.....	16	.....	10	1	.....
Philadelphia, La.	Nov. 9	1,040,245	359	.....	.....	.....	.....	.....	.....	8	3	8	.....	.....
Brooklyn, N. Y.	Nov. 9	843,602	267	.....	.....	.....	.....	1	.....	6	4	21	.....	6
Baltimore, Md.	Nov. 9	500,343	143	.....	.....	.....	.....	.....	.....	1	1	6	.....	.....
St. Louis, Mo.	Nov. 9	450,000	135	.....	.....	.....	.....	.....	.....	3	1	7	.....	.....
Boston, Mass.	Nov. 9	420,000	177	.....	.....	.....	.....	.....	.....	6	.....	10	.....	2
San Francisco, Cal.	Nov. 1	330,000	117	.....	.....	.....	.....	.....	.....	9	2	1	.....	1
Cincinnati, Ohio.	Nov. 9	325,000	108	.....	.....	.....	.....	.....	.....	3	.....	8	1	1
New Orleans, La.	Nov. 2	254,000	110	.....	.....	.....	.....	.....	.....	1	1	5	.....	.....
Detroit, Mich.	Nov. 2	250,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
Minneapolis, Minn.	Nov. 9	200,000	44	.....	.....	.....	.....	.....	.....	6	.....	8	.....	.....
Kansas City, Mo.	Nov. 2	180,000	38	.....	.....	.....	.....	.....	.....	3	.....	3	.....	.....
Kansas City, Mo.	Nov. 9	180,000	31	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Denver, Colo.	Nov. 1	135,000	39	.....	.....	.....	.....	.....	.....	10	.....	2	.....	.....
Denver, Colo.	Nov. 8	135,000	43	.....	.....	.....	.....	.....	.....	9	.....	4	.....	.....
Rochester, N. Y.	Nov. 2	130,000	34	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....
Rochester, N. Y.	Nov. 9	130,000	29	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....
Providence, R. I.	Nov. 9	127,000	48	.....	.....	.....	.....	.....	.....	4	.....	.....	1	.....
Indianapolis, Ind.	Nov. 8	124,450	27	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Richmond, Va.	Nov. 2	100,000	31	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Richmond, Va.	Nov. 9	100,000	36	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Toledo, Ohio.	Nov. 8	89,000	27	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....
Fall River, Mass.	Nov. 9	69,000	19	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
Nashville, Tenn.	Nov. 9	65,153	19	.....	.....	.....	.....	.....	.....	1	.....	1	.....	1
Lynn, Mass.	Nov. 9	53,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Nov. 9	42,000	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Nov. 2	42,000	12	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Galveston, Tex.	Nov. 1	40,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	Oct. 30	32,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	Nov. 6	32,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yonkers, N. Y.	Nov. 8	31,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Nov. 9	30,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	Sept. 14	30,000	8	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Altoona, Pa.	Sept. 21	30,000	10	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Altoona, Pa.	Sept. 28	30,000	5	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Altoona, Pa.	Oct. 5	30,000	13	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Altoona, Pa.	Oct. 12	30,000	8	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Altoona, Pa.	Oct. 19	30,000	2	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Altoona, Pa.	Oct. 26	30,000	5	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Altoona, Pa.	Nov. 2	30,000	8	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Altoona, Pa.	Nov. 9	30,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Nov. 9	25,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Nov. 7	22,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Nov. 9	21,553	9	.....	.....	.....	.....	.....	.....	.....	.....	*3	.....	.....
Rock Island, Ill.	Nov. 3	16,000	6	.....	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
Keokuk, Iowa.	Nov. 2	16,000	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa.	Nov. 9	16,000	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Pensacola, Fla.	Nov. 2	15,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Nov. 9	15,000	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....

* And croup.

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended October 26 corresponded to an annual rate of 17.5 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Birkenhead, viz, 9.7, and the highest in Preston, viz, 29.0 a thousand. Diphtheria caused 3 deaths in Salford and 2 in Cardiff.

During the three months ending with September, 1889, 122,036 deaths, were registered corresponding to an annual rate of 16.7 a thousand of the estimated population. Of the 122,036 deaths 12,202 were ascribed to diarrhœa; 2,314 to whooping-cough; 2,199 to measles; 1,608 to scarlet fever; 1,595 to fever; 1,380 to diphtheria, and only 2 to small-pox.

London.—One thousand three hundred and ten deaths were registered during the week, including measles, 27; scarlet fever, 27; diphtheria, 37; whooping-cough, 22; enteric fever, 21; diarrhœa and dysentery, 15; and not one from cholera or small-pox. The deaths from all causes corresponded to an annual rate of 15.7 a thousand. Diseases of the respiratory organs caused 28 deaths. In greater London 1,671 deaths were registered, corresponding to an annual rate of 15.5 a thousand of the population. In the "outer ring" the deaths included measles, 5; scarlet fever, 9; and diphtheria, 7.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended October 19, in the 16 principal town districts of Ireland, was 19.9 a thousand of the population. The lowest rate was recorded in Drogheda, viz, 4.2, and the highest in Lisburn, viz, 33.8 a thousand. In Dublin and suburbs 142 deaths were registered, including measles, 1; enteric fever, 5; diarrhœa, 8; diphtheria, 1; typhus fever and whooping-cough, 1.

BAHAMAS—*Nassau, N. P.*—Estimated population, 12,000. The United States consul reports that there is no weekly statement of total deaths. The city is healthy.

CUBA—*Havana.*—Month of October, 1889. The sanitary inspector, United States Marine Hospital Service, Dr. D. W. Burgess, reports that there were 452 deaths during October. Of this number 26 were from yellow fever, 2 from enteric fever, 1 from bilious fever, 11 from so-called pernicious fever, 2 from paludal fever, 4 from diphtheria and croup, and 1 from glanders.

Five of the deaths from yellow fever were among soldiers and sailors in the military hospital, while the remaining 21 were among civilians in various parts of the city.

Santiago de Cuba.—The United States consul reports that for the first half of October (1st to 15th) there were 49 deaths, of which 12 were from yellow fever, 2 from pernicious fever, and 3 from diphtheria and croup. He calls attention to the fact that at present a good many tramp steamers arrive at Santiago from Havana, where they have been at anchor in the bay from six to twelve days discharging coal. From Santiago these steamers take iron ore to Philadelphia or Baltimore.

A rigid inspection of these vessels is, in his opinion, an absolute necessity, as they are a constant menace both to Santiago and to ports in the United States.

VENEZUELA—*Maracaibo.*—

UNITED STATES CONSULATE,
Maracaibo, October 7, 1889.

SIR: I take the liberty to forward inclosed a letter received from United States Consul L. B. Smith at Curaçao, and the correspondence with the proprietor of the Hotel Cosmopolite, at Maracaibo, with translations, also a cut from the New York *Herald* of September 20, 1889. Permit me to state that there never was a Mr. Edward F. Jones at Maracaibo, neither is the yellow fever raging fiercely here, neither has the entire shipping been infected, neither have we many cases in the city.

The deaths of the two electrical engineers can not be denied. Mr. John B. Adams' case was reported to the Department in dispatch No. 557, of November 28, 1888, the other, of Mr. E. G. Tupper, in dispatch No. 563, of January, 1889. It is well known that yellow fever is endemic here, but we have no epidemic. The health of Maracaibo at this time is such that I have invited my family to spend some months with me, and I expect them to arrive next month. As the Consular Regulations prohibit newspaper correspondence, I humbly beg that the Department will give the truth to the public in the interest of our commercial intercourse with this port, which forwarded over $2,000,000 worth of merchandise in American bottoms to the United States during the quarter ended September 30, 1889.

I have the honor to remain, sir, your obedient servant,

E. H. PLUMACHER,
United States Consul.

Hon. WILLIAM F. WHARTON,
Assistant Secretary of State, Washington, D. C.

AUSTRIA—*Vienna.*—*Death from Glanders.* [From the *British Medical Journal*, November 2, 1889.]—Dr. Hofman von Wellenof, assistant to Professor Grüber in the Institute of Hygiene, age 26, "had under his care a coachman who had contracted glanders from one of his horses. In preparing microscopic specimens of the bacilli of glanders, Dr. Hofman himself fell a victim to the disease, infection, as was proved by a *post mortem* examination having taken place through the mucous membrane of the respiratory passages. Death ensued very rapidly."

INDIA—*Calcutta.*—Month of July, 1889. Population, including Fort William and port of Calcutta, 433,219; the proportion of males to females being 2 to 1. Total number of deaths 960; including cholera, 73; and small-pox, 1.

PERSIA—*Bushire—(Persian Gulf).*—The United States minister has furnished the following to the State Department:

Quarantine measures against cholera adopted by the local authorities, August 13, 1889.

1. Vessels arriving from Bassorah are to lie in outer roads until medically inspected.

2. Masters will be warned through British consular authorities at Bassorah, and by hoisting signal flags B, N, N, at the residency flagstaff, to hold no communication with shore until medical inspection has been made and permission granted.

3. If a suspicious case has occurred on board, the vessel is to be anchored in outer roads and to hoist the proper flag.

4. All boatmen, purveyors, etc., shall be forbidden to hold communication with vessels arriving from Bassorah (other than oral communication) until free pratique has been granted to such vessels. The pilot is not to board a steamer until she has been inspected. If she is declared infected he will be kept in quarantine for a longer or shorter time according to the state of the vessel.

5. Any vessel arriving here from Bassorah upon which no case of cholera or choleraic diarrhoea has occurred is not to be interfered with by the quarantine regulations.

6. Any vessel arriving here from Bassorah on which a case of cholera has occurred is to be held in quarantine; no one on board being allowed to land at Bushire. All who intend to land will be kept in quarantine until five days have passed from the time of their vessel's leaving Bassorah. Such persons will be landed at the island of Jazurah, where accommodation has been provided. Those actually suffering from cholera will be kept in a hulk (native boat) moored in the harbor.

7. The inspection of vessels will be carried on under the direction of the residency surgeon, and by him or his subordinates, or by the apothecary of the Laurence.

PERSIA AND MESOPOTAMIA.—*Cholera.*—

[From the report of proceedings of the Sanitary Council at Teheran, Persia, September 24, 1889.]

BUSHIRE, *September* 20.—According to recent report, cholera no longer exists at Mohammerah, and those who had dispersed have returned to their homes. Thirty to 40 deaths daily still occur at Bassorah.

At Bagdad, where before from 300 to 400 deaths occurred daily, now but 130 are reported. The wealthy inhabitants and most of those who could afford to get away have left the city.

In Bushire cholera is reported no longer to exist.

In Bender-ih-dâre 8 deaths in all have occurred. Strict regulations were enforced, and a severe quarantine is still maintained, so that pilgrims and travelers are forbidden to go about.

KASR-IL-SHIREEN, *Moharran* 24 (*September* 20).—Yesterday a servant of an artillery officer died of cholera in quarantine, also a poor traveler, also 3 pilgrims and 3 other inhabitants of Kasr. All were immediately buried.

KIREND, 24*th Moharran* (*September* 20).—Thank God, yesterday and to-day no cholera.

KASR-IL-SHIREEN, 24*th Moharran* (later).—Yesterday 2 cases of cholera were reported in a village 2 miles beyond Kasr. Four cases are also reported in Shayil, 4 miles beyond Kasr.

Last night 4 Turkish pilgrims died in the caravanserai here.

25*th Moharran*.—Yesterday the director of quarantine here gave permission to all who had conformed to the quarantine regulations to go on their journey towards Kerbelî. Two Turkish pilgrims died here last night, also 3 of the inhabitants of Kasr, and 1 death is also reported among the nomadic tribe of Sanjabee.

26*th Moharran*.—Many pilgrims who are detained in quarantine are considerably affected, 2 or 3 deaths occurring daily. Three Turkish pilgrims died yesterday.

Two persons connected with quarantine died yesterday, and were immediately buried.

The inhabitants of Kasr believe daily washing of great use, also the drinking of pomegranite water.

SU-IH-PUT, 26*th Moharran*.—All of those formerly reported as ill, have since died. To-day a pilgrim, who was taken ill last evening at sunset, died, but altogether cholera here seems milder.

KIREND, 26*th Moharran*.—Quarantine still exists, and the authorities are doing everything possible to prevent an increase of cholera. Two pilgrims died here to-day. Cholera does not exist in the middle of the town.

PACIFIC OCEAN.—*Gilbert Islands, Butaritari*.—Population, census of 1886, and present estimate, 3,000. Weekly reports from the United States consul, March 17 to September 22, 1889, give a total of 18 deaths. The consul states that the climate is very healthy. Most deaths occur in infancy; deaths of adults are generally due to old age or colds.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
Rio de Janeiro	Oct. 7	350,000	279	.....	2	28	8	4	.....	.....	.....	.....
Palermo	Oct. 5	250,000	60	.....	.....	.....	.....	.....	.....	2	.....	.....
Toronto	Nov. 2	175,000	57	.....	.....	.....	.....	3	.....	.....	.....	.....
Havre	Oct. 19	112,074	48	.....	.....	.....	.....	1	.....	.....	.....	.....
Gibraltar	Oct. 20	23,681	7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Nov. 1	18,284	15	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTICE.—The following numbers of the present volume of abstracts are desired to complete a number of files in the Marine Hospital

Bureau. Medical officers of the service, and others who receive the abstracts, who do not keep permanent files, will confer a favor by forwarding to the Bureau the numbers indicated. Officers of the Marine-Hospital Service, however, will not break the official files at the stations.

The desired numbers are numbers 3, 4, 7, 8, 9, 16, 23, 24, 30, 31, 32, and 33 of the current volume.

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract / No. 47. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., November 22, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended November 22, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.

UNITED STATES.

Special Reports.

REPORT UPON THE MICRO-ORGANISMS IN SCRAPINGS FROM THE NAILS OF SURGICAL NURSES.

HYGIENIC LABORATORY, U. S. MARINE HOSPITAL,
New York, November 18, 1889.

SIR: In accordance with your request of June 23, I have the honor to state that I have carried on a line of experimentation to determine the micro-organisms in the nail-dirt from the nurses of the surgical wards of this hospital.

Many observers have spoken of the danger of wound infection from this source; some have asserted that it was an impossibility to thoroughly cleanse the hands, more especially the nails, of operators and assistants.

Many plans have been devised, some of which are too tedious for application, to insure the perfect cleanliness of hands. Granting that this is accomplished on the part of the operator it does not, from our observation, apply to the surgical nurses and attendants of an operating-room.

In this investigation attention was chiefly directed to the hands of the surgical nurses and those having charge of or making surgical dressings. Observations were made from time to time, extending over a period of three months, the clientele of the wards constantly changing, so that a patient designated as a source of infection would not apply to the whole series.

The nurses had been, we believe, instructed to use the nail-brush and other agents for cleansing their hands. The usual method was as follows: Scrub the hands with soap and warm water to be followed by immersion in bichloride solution (1 to 3,000), the usual ward mixture for the surgical wards.

The examinations were so timed as to take the nurses when they were making or assisting in dressings, or just before an operation. In all the examinations only in two instances were the hands found to be sterile; in all the others bacteria were found.

To make the matter as clear as possible, we prefer to give the observations in detail and allow their results to speak for themselves.

The general plan of procedure that was followed was—

The nurse was called from his ward to the laboratory and was caused to immerse his hands in moderately strong solution of sodium carbonate, which had been previously rendered sterile. After allowing them to remain in this solution three to five minutes scrapings were made from their hands and under their nails by means of a stout-pointed aseptic needle, and the material was transferred to test tubes containing nutrient agar-agar, and roll Esmarch's tubes made; these were placed in a thermostat, at a temperature of 37° C., for twelve to sixty hours.

Usually the development of colonies had taken place at the end of twelve hours, but in some instances the bacteria were inhibited for a considerable time.

Observation 1—*Assistant surgical nurse.*—To appearances his hands were clean. He stated that he had just finished preparing his hands for assisting in an operation, having scrubbed them with soap and warm water, then dipping them in a bichloride solution (1 to 2,000).

His hands were soaked for five minutes in a sterilized solution of sodium carbonate, then scrapings were made with the needle from the palmar surfaces and under the nails.

Agar-agar Esmarch tubes give, in twenty hours, a considerable number of colonies in the first and second dilution. On cultivation, the colonies gave *Streptoccoccus pyogenes.*

Previous to examination he had been assisting in dressing. His special detail for the operation was to hand sponges to the operator.

Observation 2—*Surgical nurse*, just after completing a dressing for several leg ulcers, had washed his hands in bichloride solution (1 to 1,000).

Cultivations made in the same manner from the nails gave a few colonies of *Streptoccoccus pyogenes.*

Observation 3—*Interne*—Had been dressing suppurating wounds previously, during which he had used bichloride solution *ad libitum.*

After the hands had been soaked in the sodium carbonate solution, scrapings were made from the nails and Esmarch tubes made therefrom. Thirty-six hours after a few small colonies were apparent in the first tube, none in the first and second dilutions. Forty-eight hours after they were transplanted in various media for differentation. All the colonies proved to be *Streptoccoccus pyogenes.*

Observation 4—*Same as in* 3.—Had just finished dressing cases. Hands prepared for experiment by scrubbing with soap and water, then transferred to 90 per cent. alcohol for a few minutes, then in (1 to 2,000) bichloride solution, bichloride neutralized by sodium carbonate. Scrapings from under the nails gave negative results.

Observation 5—*Assistant surgical nurse* called down to the laboratory while assisting in surgical dressings. His hands had smell of iodoform. When questioned about what he had been doing with iodoform he stated that he had been handing iodoform gauze to the doctor.

Cultivations made in the usual manner as in the other cases and Esmarch tubes then made. In twenty-four hours all the tubes contained a large number of colonies. All the colonies, on examination, proved to be micrococci. These were transferred to different media and, on cultivation there, were found to be *Staphyloccoccus pyogenes aureus* and *Staphyloccoccus pyogenes albus.*

Observation 6—*Assistant surgical nurse.*—Had just finished his work in assisting in the morning dressings, no special preparation of hands

save that he had washed them in bichloride solution just at the close of the dressings.

Examination gave a few colonies of a micrococcus, the *Streptococcus pyogenes.*

Observation 7—*Head surgical nurse.*—Had just prepared the operating-room for an operation, and at the time of the examination had finished cleansing his hands and was waiting to assist.

Cultivations were made from the scrapings of the nails in the usual manner.

The Esmarch tubes gave a very large number of colonies. Three varieties were found. First, a large bacillus, rapidly liquefying gelatine, the *Staphyloccoccus pyogenes albus* and *Staphyloccoccus pyogenes aureus.* The nurse's duty this day was to pass sponges to the operator.

Observation 8—*Head surgical nurse.*—He had just prepared the operating-room for an operation, and had prepared his hands for assisting in the operation.

Cultivations made from the nails gave a large number of colonies. These were found to be of two varieties; a large bacillus and micrococci. The micrococci, on culture, were found to be *Staphyloccoccus albus* and *aureus.*

Observation 9—*Surgical nurse.*—Examination made after the morning dressings had been made; the nails were not clean, scrapings from them gave a few colonies which, on examination, were found to be a sarcina.

Observation 10—*Nurse of venereal ward.*—His hands were in a filthy condition, his nails in mourning; he stoutly asserted that he had just completed the toilet of his hands by a thorough (?) washing in (1 to 2,000) bichloride solution. The cultivations were made in the usual manner.

The result was a little different than was expected. There was an enormous number of colonies of bacteria quite different in appearance than had been encountered in the other cases; the majority of these were of bacilli. Two varieties of bacilli, identical with those encountered in sewage, and a large non-liquefying micrococcus.

In a subsequent examination, made during the time he was dressing suppurating sores, *Staphyloccoccus pyogenes albus* was found.

Observation 11—*Nurse of venereal ward.*—Hands had been washed in bichloride solution (1 to 1,000) just after dressing cases, chiefly chancroidal ulcers. The examination gave a few colonies of *Streptococcus pyogenes.*

Observation 12—*Nurse of venereal ward.*—No previous disinfection of hands. Hands soaked in a solution of sodium carbonate; scrapings from the nails gave a considerable number of colonies of a micrococcus which was demonstrated to be *Streptococcus pyogenes.*

Observation 13—*Nurse of venereal ward.*—States that on this occasion he had been assisting the doctor in dressing several cases of suppurating buboes.

This examination did not give any colonies of micro-organisms of pus, but gave a large number of colonies of large saprophytic bacilli.

Observation 14—*Assistant surgical nurse.*—Had been assisting in surgical dressings.

Esmarchs made from scrapings of the nails gave quite a number of colonies, two varieties of bacteria; a large saprophytic bacillus and *Staphyloccoccus pyogenes albus.*

Observation 15—*Surgical nurse.*—No previous treatment of the hands by disinfectants.

The examination gave a variety of *streptococcus*, its properties not determined.

Observations 16 *and* 17—*Assistant surgical nurse.*—Hands had been washed and scrubbed with soap and water, then soaked in alcohol, 90 per cent., for five minutes, then in bichloride solution (1 to 1,000) for two minutes.

After neutralization with sodium carbonate, Esmarch tubes were made. These gave negative results.

Observation 18—*Nurse of venereal ward.*—Had been assisting in dressing suppurating buboes. A pure culture of *Staphyloccoccus pyogenes albus* was found.

Observation 19—*Nurse of venereal ward.*—Engaged in dressing chancroidal ulcers; hands cleansed with soap and water only.

Cultivations from the nails give a large number of colonies, consisting of two varieties; a large liquefying bacillus and a large coccus, not classified.

Observation 20—*Interne.*—Had finished dressing suppurating cases two hours previously; hands had been washed and scrubbed with soap and water.

The examination, made in the usual manner, gave a large number of colonies, the majority consisting of *Staphyloccoccus pyogenes albus* and a few colonies of a saprophytic bacillus.

Observation 21—*Surgical nurse.*—Hands examined just after an operation; saprophytic only, no pus micro-organisms.

Observation 22—*Head surgical nurse, first female ward.*—No disinfection of hands. Two varieties of bacteria: a large liquefying bacillus and *Streptococcus pyogenes.*

Observation 23—*House physician.*—No disinfection of the hands. Examination gave a pure culture of *Streptococcus pyogenes.*

Observation 24—*Surgical nurse, male.*—No disinfection of hands; had been assisting in an operation for skin grafting (Theirsch's operation).

Two varieties of bacteria were found: a saprophytic bacillus and *Staphyloccoccus pyogenes albus.*

Observation 25—*Assistant house surgeon.*—No special preparation of the hands. Had been dressing cases previously.

Examination showed *Streptococcus pyogenes.*

Through the kindness of one of the staff of a leading New York hospital the inoculations were made from the nails of cases 21 to 25, inclusive.

Observation 26—*Surgical nurse.*—Had just finished giving a new patient a bath; before this he had been assisting in making some dressings.

Examination gave a few colonies of bacteria, which investigation proved to be *Staphyloccoccus pyogenes albus.*

A marked inhibition was noticed in this case; no colonies appearing until the fourth day.

Observation 27—*Assistant surgical nurse.*—Hands cleansed with soap and water, then soaked in alcohol and ether, then in bichloride solution (1 to 2,000).

Examination then made after the usual manner gave a great number of colonies—so many that it was with difficulty they could be isolated. Varieties were not determined.

Control experiments.

The surgical nurses, three in number, were called to the laboratory and instructed to wash their hands thoroughly with soap and warm

water. Their finger tips were then dipped in a gelatine culture of *Staphyloccoccus pyogenes aureus*, then the hands were treated with soap and water, then in alcohol three minutes, then in bichloride solution (1 to 500) three minutes, then this was neutralized in the usual manner and the nails examined. In all the cases there developed a considerable number of colonies consisting of a saprophytic bacillus. None of the pus organisms were found.

In another instance all the day nurses were prepared in the same manner. Their hands were then infected with *Staphyloccoccus pyogenes aureus*, then scrubbed well with soap and warm water, then treated for six minutes with alcohol containing (1 to 3,000) bichloride, then in bichloride solution (1 to 500), (1 to 1,000), (1 to 1,500), (1 to 2,000), (1 to 2,500), respectively, for another six minutes, and then neutralized in the usual manner.

The Esmarch tubes made from the nail scrapings of the hands subjected to (1 to 500), (1 to 1,000), (1 to 1,500) remained sterile, but in the others there were many colonies of *Staphyloccoccus pyogenes aureus*.

Sources of contamination.

It is safe to say that in most cases of suppuration you will find present a micro-organism for its production.

In the Marine-Hospital Service a great number of chronic patients are treated, and among these are those suffering from old leg ulcers which have no prospect of healing, nor do their possessors, as a rule, show much solicitude for recovery.

These patients "go the rounds" from one hospital to another, and carry a well-assorted stock of pyogenetic material.

Five cases were studied in connection with this paper. Two cases were treated with hot bichloride solution (1 to 1,000), two others with bromine water, and one with boracic acid ointment. In all the cases pus organisms were found. They were less in number in those treated with bichloride solution; next in order were those treated with bromine water, and an enormous number in the one treated with boracic acid.

Another great source of infection are the venereal cases, a majority of which are suffering from a suppurating disease.

A careful bacteriological examination was made of the walls and tables with which the hands of the nurse had not come in contact, and in no instance were there any pus organisms found. Whereas on the other hand the articles which were used by the nurse, such as irrigator tubes, basins, etc., including coverings to surgical dressings, gave pus micro-organisms.

From the foregoing it is thought safe to assert that the hands of the nurse play a greater rôle as an infectious agent than is supposed.

In twenty-six observations, pus organisms were found in sixteen; *Staphyloccoccus pyogenes albus* in ten; *Staphylaccoccus pyogenes aureus*, two; *Streptococcus pyogenes*, four.

Fürbinger has offered a very good plan for rendering the hands aseptic. It is the same as was followed in the control experiments. From our observations, it appears that if we add a small quantity of bichloride solution to our alcohol the effect is much more constant, and, with proper care, the hands can be freed from micro-organisms.

Control experiments were made on all the observations, and in but one instance did the experiment have to be discarded on account of outside contamination.

These few observations may serve to emphasize the constant danger of infection from these sources.

My thanks are due to Interne George B. Young for his efficient services.

Very respectfully,

JOS. J. KINYOUN,
Assistant Surgeon, Marine-Hospital Service.

To the SUPERVISING SURGEON-GENERAL U. S. M. H. S.

YELLOW FEVER—*Key West, Fla.*—The following telegram has been received:

November 15, 1889.—One pronounced and 1 suspicious case of yellow fever at Key West to-day; 26 days since the Ellinger case.

J. L. POSEY, M. D.,
Sanitary Inspector, Marine-Hospital Service.

HEALTH OF THE UNITED STATES NAVY.—*Report of the Chief of the Bureau of Medicine and Surgery to the Secretary of the Navy, for the year* 1888.

Number of patients admitted to the sick list, and under treatment during the year 1888, 11,499. Of this number 7,820 were on vessels afloat, 1,527 in hospitals, and 2,152 at navy-yards and shore-stations.

The daily average of sick on vessels afloat was 160. The average each case was under treatment represented a loss of seven and one-half days. Eighty-seven in a thousand were invalided to hospitals.

The total number of deaths in the naval service was 123. Of this number 57 occurred on vessels afloat, and 66 in hospitals and on shore-stations.

Sixteen cases of accidental drowning are included in the record, and the ratio of deaths was 12.35 in a thousand for the entire service.

The number of persons examined for the naval service, including apprentice boys, was 10,000. Of this number 3,914, or more than one-third, were rejected for physical disqualifications. The number rejected for color-blindness was 130, a ratio of 13 in a thousand.

ADULTERATION OF FOOD AND DRUGS.—The report of the Commissioner of Internal Revenue to the Secretary of the Treasury, June 30, 1889, calls attention to the act of Congress October 12, 1888, to prevent the manufacture or sale of adulterated food or drugs in the District of Columbia, and to the fact that no samples have been submitted for examination under this new law.

Copies of European laws regarding these adulterations are included in this and the previous year's report, and the Commissioner states, regarding the European laws, that—

They furnish hints for the preparation of regulations under the existing law in which this office is interested. They also furnish models for the amendments which are needed and generally are useful as guides in future State and Federal legislation on this subject. It is evident that unity of action between State and Federal authorities in the matter

must be secured before the best results can be accomplished. On the one hand opponents of the passage of Federal laws on food adulteration have urged that such laws interfere with the exercise of the police powers of the States, and that under the Federal Constitution such powers were not surrendered to the United States; on the other hand, certain laws passed by States to prevent the sale of impure food therein have been found to be in conflict with the power conferred by the Constitution on Congress to regulate foreign commerce and commerce between the States; also in violation of the provision forbidding a State to make or enforce any law which shall abridge the privileges or immunities of citizens of the United States.

The report of the microscopist, included in the Commissioner's report, after referring to the apathy upon this subject, states as follows:

This office has brought the subject to the attention of the Commissioners of the District, the health department, and the local press by letters and by furnishing them with copies of the law, regulations, and blank forms of application, but has not succeeded in enlisting their active co-operation.

The law does not provide that the Commissioner of Internal Revenue shall enforce its provisions in procuring samples of food or drugs, that matter being delegated to "any purchaser," "any health officer, inspector of nuisances, or any food inspector," only requiring that the analysis shall be under his control "under such rules and regulations as may be prescribed by the Secretary of the Treasury." * * *

That a national law to regulate the sale of adulterated articles of food is needed in this country, where the manufacture and sale of adulterated foods of all kinds is carried on more openly and on a larger scale than in foreign countries, goes without question, and it is a great pity that the law intended for this capital city should prove a dead letter from the outset, because of the lack of certain administrative features and clear definitions. It, therefore, seems desirable to have the law amended in these regards. With the experience gained in enforcing a proper food-adulteration law in the District of Columbia, the extension of its provisions to all territory over which the United States has exclusive jurisdiction would readily follow, and finally it could be so enlarged as to embrace all adulterated articles of food intended for consumption sold in any State or Territory other than where produced. With the co-operation of the different State and local authorities a very thorough supervision over such foods could be maintained. A national law would not apply to adulterated articles of food manufactured and sold in the State or Territory where produced, unless it should take the form of a revenue measure, imposing a tax on the manufacturers of and dealers in such commodities.

The different State laws on food adulteration are, with one or two exceptions, entirely inoperative. Being drawn up with the idea that an adulterated article of food is necessarily injurious to health, these laws fail to reach the great majority of cases where cheap and harmless substitutes are used.

CONSUMPTION.—*Danger of health resorts becoming infected.*—The October circular of the State board of health of California contains the following:

Our remarks in the monthly circular of last month, regarding the contagiousness of this disease, and the undesirability of inviting its

victims to this coast, seems to have given great umbrage to our southern neighbors, who seem to look upon the solicitude of the State board of health for the sanitary welfare of the State as a direct blow at their prosperity, and an endeavor to prevent the immigration of diseased persons into their midst. The State board has no such desire or power; it can only advise the public of the danger incurred from the promiscuous mingling of consumptives with healthy people, which is its duty. M. Delargy, in a paper contributed to the *Journal Hygiene*, points out that certain mountain regions in Europe, formerly exempt from phthisis, have now become infected since intercourse with cities and phthisical localities have been furnished, and considers the crowding together of a large number of phthisical cases, in the most healthy localities, will soon have an unfavorable effect upon the purity of the atmosphere. Indeed, it may be said that consumption is never contracted except by contact, by association, or by living in close proximity. The length of time consumed by phthisis before proving fatal, enables it to infect all susceptible persons coming in contact with it, hence its great danger when not isolated. Cadeac and Malet, by experiment, proved that tubercular matter, dried and pulverized, was capable of transmitting the disease one hundred days after such preparation, and Pietro asserts that tubercular matter will retain its virulence ten months after drying. Desiccation or drying of the sputa seems to be the most effective way of disseminating the disease. Cornet found that of 311 animals inoculated with the dust scraped from the rooms occupied by phthisical patients, that 167 died soon after; of these one-fifth were found to be tuberculous. He says, further, that a phthisical patient, to be innocuous, must never, under any circumstance, expectorate upon the floor, or into a handkerchief, but always into a spittoon cup containing water. which must be disinfected and frequently changed. The danger of contagion from consumption is not exaggerated, preventive measures are as applicable to the south as they are to any other part of California, and the State board of health would be derelict in its duty if it did not point out this fact and call public attention to the necessity of caution in dealing with it.

Reports of States, and Yearly and Monthly Reports of Cities.

ALABAMA—*Mobile.*—Month of October, 1889. Estimated population, 40,000. Total deaths, 22; including croup, 1.

CALIFORNIA.—*Monthly circular of the State board of health for October*, 1889.

Reports received from 101 localities, with an estimated population of 846,300, give the number of deaths as 1,007, which is a percentage of 1.2 per thousand in the month, or an annual mortality of 14.4, which is a slight increase over the preceding two months, but sufficiently low to indicate a very favorable condition of the public health.

Consumption as usual heads the list with 147 deaths, nearly one-seventh of the total mortality. Diphtheria and croup caused 35 deaths; typhoid fever, 48; scarlet fever, 4; and whooping-cough, 4.

Scarlet fever was quite prevalent in San Francisco, and also in Alameda. In the latter town—

The health officer, Dr. J. T. McLean, believes the disease to have been spread by the carelessness of parents in permitting children having the disease in a mild form to attend school, no physician being called to these cases, and consequently not reported to the health officer, as they should be. *In Alameda, the board of health has very properly passed an ordinance requiring a placard 3 by 6 inches to be placed conspicuously on every dwelling containing any case of scarlet fever, diphtheria, or small-pox, making it a penal offense to remove such notice until all danger of infection has ceased.* This precaution is eminently proper, and should be adopted by every health board and health officer in the State. Such notification of disease would save many lives, and be an efficient means of arresting the spread of these disorders when otherwise they might become epidemic.

San Francisco.—Year ended June 30, 1889. (Annual report of the health department.) Estimated population, 330,000, including a Chinese population of 30,000. Total deaths, 5,729, including 559 Chinese. The death-rate among the Chinese was 18.63 a thousand; among the other nationalities, taken together, 17.23 a thousand. Diphtheria caused 151 deaths; croup, 90; scarlatina, 28; small-pox, 67; and typhoid fever, 152. There was an increase of 251 deaths from zymotic diseases over the preceding year. The annual death-rate, however, is the lowest of the last ten years, being 17.36 a thousand, and there being but four years in the last twenty when it was lower, viz, in 1872, 1876, 1878, and 1879, the last year having the lowest recorded rate, 14.75 a thousand. There were fumigated during the year 134 houses on account of diphtheria and scarlet fever. An apparatus for the disinfection of bedding, clothing, etc., from houses in which have occurred cases of small-pox, diphtheria, and other infectious diseases, is now ready to be erected in a suitable locality.

Month of October, 1889. Total deaths, 507; including diphtheria, 6; croup, 4; typhoid fever, 30; scarlatina, 3; and whooping-cough, 2.

Oakland.—Month of October, 1889. Estimated population, 60,000. Total deaths, 66; including diphtheria, 3; croup, 1; and typhoid fever, 3.

Sacramento.—Month of October, 1889. Estimated population, 35,000, Total deaths, 30; including typhoid fever, 1.

CONNECTICUT.—Month of October, 1889. Reports to the State board of health, New Haven, from 166 towns, having an aggregate population of 755,836, give a total of 1,027 deaths, including scarlet fever, 7; diphtheria and croup, 71; enteric fever, 37; and whooping-cough, 12.

The population of towns not reporting is 3,186. Concerning typhoid fever the secretary of the State board writes as follows:

Typhoid fever has decreased since September. It has also been much less fatal throughout the State than it was in October of last year.

There have been but 37 deaths, while in 1888 there were 62 in the month.

The occurrence of the disease in some of the students of Yale University has been widely published, and the misrepresentation and exaggeration of facts has created much unnecessary alarm.

Among the 1,500 persons connected with the University there have been 9 cases of typhoid fever. This number includes 1 tutor. These had all been absent from New Haven during the vacation. They arrived at college on or about the beginning of the term, September 19. Several of them became ill so soon after their arrival as to render it highly probable that they had received the infection elsewhere. And none of them were taken ill so late as to preclude the possibility of that origin of the disease.

Due consideration should be given to the fact that about 1,500 persons, at an age most susceptible to the typhoid infection, and at a season of the year when that infection is most active, assembled on or near the same day, at the same place, from every section of the country, and in many instances from places in which typhoid fever was prevailing. These circumstances, taken in connection with the well known predisposing influence of a change of residence, justifies the suggestion that most if not all the college cases may have received the germs of the disease outside of New Haven.

The sanitary condition of the college grounds and buildings has been carefully investigated by officials of both the local and State boards of health and found excellent.

New Haven.—Month of October, 1889. Estimated population, 85,000. Total deaths, 114; including typhoid fever, 5; diphtheria and croup, 6; whooping-cough, 2.

IOWA.—The October bulletin of the State board of health reports a decrease of scarlet fever and an increase of diphtheria throughout the State, but nowhere is there an epidemic. The bulletin also contains the following statement regarding the "relations between the State board of health and the Iowa railroads:"

In the matters of quarantine and in the transportation of corpses, especially of those having died of infectious diseases, the State board of health has always found the railroads of the State ready and anxious to heartily co-operate. There are a few other matters, however, affecting the lives of many of our people that have not received the prompt compliance on the part of the railroads that the board, acting only in the interest of the lives of the people, has desired or expected.

The board asks that such changes be made by the use of automatic couplers, and the improved guards for the "frogs" as will prevent the many accidents occurring by the present methods.

It asks further that the tools carried on the passenger coaches shall be placed where, in case of accident, they will be most accessible instead of at the ends of the cars where they now are; and that the water-cooler

be not placed alongside the water-closet, so that when the latter is opened one who is drinking may not be exposed to unpleasant and often noxious odors.

We are happy to state that in an interview with Dr. P. W. Lewellen recently on this very point, Mr. West, their master mechanic at Burlington, stated that they had now about perfected "a plan for carrying all the tools referred to about the middle of the coach, and easily accessible to any one wishing to use them." As an evidence of their desire to afford the best service possible from a sanitary point, both Mr. C. E. Perkins, the president, and Mr. Brown, the assistant superintendent of the road, assured Dr. Lewellen that they "would be only too glad to adopt any regulation the State board of health may deem necessary to improve and maintain the sanitary condition of their coaches."

MICHIGAN.—Week ending November 9. Reports to the State board of health, Lansing, from 62 observers in different parts of the State, indicate that inflammation of brain, cerebro-spinal meningitis, cholera infantum, membranous croup, diphtheria, dysentery, erysipelas, measles, puerperal fever, and whooping-cough increased, and cholera morbus and scarlet fever decreased, in area of prevalence.

The disease having the greatest area of prevalence was neuralgia.

Detroit.—Month of October, 1889. Estimated population, 250,000 (1,800 added by recent annexation). Total deaths, 300, including diphtheria, 19; typhoid fever, 8; scarlet fever, 2.

OHIO—*Cincinnati.*—Month of October, 1889. Estimated population, 325,000. Total deaths, 449, including croup, 13; diphtheria, 46; typhoid fever, 11; whooping-cough, 1.

Dayton.—Month of October. Estimated population, 60,000. Total deaths, 65, including croup, 3; diphtheria, 10; and typhoid fever, 4.

RHODE ISLAND.—Month of October, 1889. The number of deaths in the towns making returns and representing an estimated population of 304,660, was 458.

Typhoid fever was reported from more than half the towns in the State, but in lessened numbers compared with September. Measles increased 30 per cent. in number of localities, and was epidemic in and around Centredale, Pawtucket, and Ponagansett. Scarlet fever was reported from 4 towns only and diphtheria from 7.

June and October are the healthiest months, taking one year with another for a series of years.

TENNESSEE—*Nashville.*—Year ended September 30, 1889. Estimated population, white, 41,836; colored, 23,317; total, 65,153. Deaths, white, 530, a yearly rate of 12.66 in a thousand of the white population; colored, 494, or 21.18 a thousand; total, 1,024, or 15.71 a thousand. A comparative statement shows that this is the lowest rate of death in the last fifteen years, and it is in striking contrast to the rate of the first year given (1875), which was 34.55.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Nov. 16	1,589,261	607	.....	.....	.....	.....	.....	.....	11	2	16	3	7
Philadelphia, Pa.	Nov. 16	1,040,245	370	.....	.....	.....	.....	.....	.....	8	6	8	.....	3
Brooklyn, N. Y.	Nov. 16	843,602	294	.....	.....	.....	.....	1	.....	5	5	22	.....	.....
Baltimore, Md.	Nov. 16	500,343	125	.....	.....	.....	.....	.....	.....	4	1	4	.....	2
Boston, Mass.	Nov. 16	420,000	148	.....	.....	.....	.....	.....	.....	2	.....	7	.....	.....
San Francisco, Cal.	Nov. 8	333,000	99	.....	.....	.....	.....	.....	.....	4	.....	4	.....	.....
Cincinnati, Ohio.	Nov. 16	325,000	101	.....	.....	.....	.....	.....	.....	2	.....	10	.....	1
New Orleans, La.	Nov. 9	254,000	114	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Washington, D. C.	Nov. 9	250,000	73	.....	.....	.....	.....	.....	.....	3	.....	3	.....	1
Detroit, Mich.	Nov. 9	250,000	74	.....	.....	.....	.....	.....	.....	2	.....	8	.....	.....
Cleveland, Ohio.	Oct. 19	235,000	85	.....	.....	.....	.....	.....	.....	6	3	6	.....	2
Cleveland, Ohio.	Oct. 26	235,000	73	.....	.....	.....	.....	.....	.....	4	2	7	1	.....
Pittsburgh, Pa.	Nov. 9	230,000	73	.....	.....	.....	.....	.....	.....	6	3	7	.....	.....
Minneapolis, Minn.	Nov. 16	200,000	39	.....	.....	.....	.....	.....	.....	4	.....	7	.....	1
Denver, Colo.	Nov. 15	135,000	45	.....	.....	.....	.....	.....	.....	3	1	7	.....	.....
Providence, R. I.	Nov. 16	127,000	44	.....	.....	.....	.....	.....	.....	3	.....	3	.....	.....
Indianapolis, Ind.	Nov. 15	124,450	27	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Toledo, Ohio.	Nov. 15	89,000	31	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....
Fall River, Mass.	Nov. 6	69,000	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn.	Nov. 19	65,153	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	Nov. 9	60,145	29	.....	.....	.....	.....	...	.....	1	.....	.....	.....	.....
Charleston, S. C.	Nov. 16	60,145	31	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	Nov. 16	45,867	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Nov. 16	42,000	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Nov. 9	42,000	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Nov. 8	40,000	19	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Yonkers, N. Y.	Nov. 15	31,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Canton, Ohio.	Nov. 15	30,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Nov. 16	30,000	8	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Auburn, N. Y.	Nov. 9	26,000	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Auburn, N. Y.	Nov. 16	26,000	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Haverhill, Mass.	Nov. 16	25,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Nov. 14	22,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Nov. 10	16,000	5	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended November 2 corresponded to an annual rate of 17.5 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz, 11.6, and the highest in Preston, viz, 32.0 a thousand. Diphtheria caused 6 deaths in Manchester and 2 in Portsmouth and in Liverpool.

London.—One thousand three hundred and seventeen deaths were registered during the week, including measles, 22; scarlet fever, 20; diphtheria, 31; whooping-cough, 21; enteric fever, 19; diarrhœa and dysentery, 17; and not one from cholera, small-pox, or typhus. The deaths from all causes corresponded to an annual rate of 15.8 a thousand. Diseases of the respiratory organs caused 300 deaths. In greater London 1,647 deaths were registered, corresponding to an annual rate of 15.2 a thousand of the population. In the "outer ring" the deaths included measles, 7; scarlet fever, 8; and diphtheria, 10; and whooping cough, 7.

Corrections.—For Abstract No. 46, London, measles, "27," should read 17; respiratory organs, "28" deaths, should read 281. Ireland, week ended "October 19," should read October 26.

CUBA—*Havana.*—For the two weeks ended November 14 there were 14 deaths from yellow fever.

TURKEY.—*Sanitary commission at Constantinople.*—*The chargé d' affaires ad interim* at Constantinople has informed the Secretary of State that in accordance with instructions of September 25, 1889, he has appointed Dr. Richard Sarell, resident at Constantinople, as delegate to represent this Government at the sanitary commission in that capital.

CHOLERA IN MESOPOTAMIA.

Third article.

(From the *Revue-Medico Pharmaceutique*, Constantinople, October 31, 1889.—Translation.

The hope we expressed at the close of our last article, of an approaching diminution of choleraic mortality in Mesopotamia, has been in great part realized. Thanks to the efforts displayed by the authorities and sanitary physicians, the epidemic has been arrested in its development, and the number of victims abates notably from week to week.

We have followed the march of cholera up to the moment (September 30), when the epidemic ravaged southern Mesopotamia (Irak-Arabi), and a good part of northern Mesopotamia (El-Djezireh), from Bagdad

to Hith on the Euphrates, Tekrit on the Tigris, and the banks of the Little Zab on the side of the Turco-Persian frontier.

Later, the malady made some uncertain progress, and invaded some new localities. These are:

(1) On the Euphrates, Havas (near Hillah), and Kiabouriah (near Hindiah). But only sporadic cases occurred there, and the focus which we described in the district of the sacred localities between Samava and Mussayeb is extinguished, probably from lack of material.

(2) In the city of Bagdad only isolated cases are reported, at long intervals. Thus from September 25 to September 28, only 9 deaths were observed: 1 on September 28, 3 on September 30, 2 from October 6 to October 7, 1 on the 11th, another on the 12th, and the last on the 19th of October.

(3) From along the Tigris, above Bagdad, after the 2 deaths reported September 16, at the quarantine station of Tekrit, no news has been received, which is a good sign.

(4) Between the Tigris and the Turco-Persian frontier the epidemic heavily afflicted the city of Sueleimaniah, carrying off, in the space of about a month, nearly 150 inhabitants. It invaded the quarantine stations of Altin-Keupru and Keuy-Sandjak; on October 14 it manifested itself in the city of Erbil, between the two Zabs, where in the space of ten days (October 14 to 23), it mowed down 143 victims. By the last advices received (October 27), it has appeared at Revendauz. Mossoul is seriously threatened. We hope this important center will be spared, for cholera could not fail to gain new strength there.

(5) To conclude, in the Chat-el-Arab and the lower Tigris the situation is satisfactory, but a slight recrudescence is reported along the Diala, especially in the direction of Hanéguine and Benkoudra, the latter a neighboring place to the former. This is the return route of the Persian pilgrimage to the holy places of Kerbela, Nedjef, and their environs. In the direction of the frontier, at Kiazmieh, to the east of Bagdad, cholera continued.

The number of choleraic deaths registered from the end of July, the beginning of the epidemic, to October 25, reaches 6,867, of which 694 only are for the last four weeks.

With regard to the measures of defense, the extension of cholera has obliged the authorities to modify slightly the line of the cordon which we described in our second article. This cordon passes now by Djuhb-Kahakep, on the Tedmour route (Palmyra), Abou-Kemal, Meyadin, and Buseira on the Euphrates, Chor, Chenadiah, and Tel-Kavkoub on the Khabour, Sindjar, and Tel-Afar, through El-Djezireh (northern Mesopotamia), Ali-Hammam on the Tigris; thence it follows the line of the Great Zab, and the Revendouz-Tehaï with stations at Kelek, Guirdarech, Hindjireh, Guirdamamich, Herir, Kalakin, Koniatman, Revendouz, Mavil, Dergala, Memehal, and Rayet, on the Turco-Persian frontier.

With regard to Persia, it has been invaded by cholera to a great extent in the northern region as far as the vicinity of Hamadan. There is every reason to believe that independently of the propagation along the river Karoun, a propagation which seems to have been effected contemporaneously with the development of the disease in Mesopotamia, cholera was imported to an equal degree by the Persian pilgrims returning from Kerbela, Nedjef, etc., by way of the Diala. At present the two groups: (1) Mohamara, Fellahigé, Chouchter, Beïhehan, and (2) Kasrichirin, Kermanchah, constitute only one, and the disease seems to

gain ground, although as the journals assure us it should diminish in intensity. On the other hand a dispatch from St. Petersburg announces the appearance of cholera at Recht, a Persian city on the Caspian Sea. This alarming news has not been confirmed.

Recapitulative table of choleraic mortality in Mesopotamia from September 26 to October 26, 1889.

Place.	Date.		Deaths.
	From—	To—	
Bassora	September 24	October 19	7
Bagdad	September 28	October 25	9
Fão	October 3		1
Musseyeb	October 1	October 21	4
Samava	September 26	October 1	5
Kiazmieh	September 27	October 21	47
Kizilrabad	October 14		1
Hanéguine	September 27	October 4	23
Chamiah	September 26	October 1	48
Kerbela	September 28	October 24	42
Amara	September 29	October 9	7
Hillah and environs (Havas, etc.)	September 26	October 21	43
Kerkouk	September 27	October 20	51
Altin-Keupru	October 1		1
Suleïmaniah	September 27	October 24	146
Coubeïssa (1)	October 22		3
Zorbatia	September 27	September 28	5
Karabey (near Altin-Keupru)	September 30	October 5	3
Keuy-Sandjak	September 30	October 16	29
Anah (2)	October 2	October 7	9
Djauba (near Anah)	October 2	October 7	2
Kamich-tepé (on the Little Zab)	October 6		4
Benkoudra (near Henéguine)	October 8	October 20	36
Kiabouriah (near Hindiah)	October 9	October 13	22
Achar (near Bassora)	October 11		3
Erbil	October 14	October 23	143
			694
To which must be added the total of deaths rendered from July 27 to September 26 (see *Revue*, p. 139) or			6,173
General total			6,867

(1) *Caubeïssa.*—Although this quarantine station was declared contaminated contemporaneously with Suleïmaniah the 3 deaths of October 22 are the sole indication of mortality we have.

(2) The reported deaths at Anah and Djauba are denied.

PERSIA—*Cholera.*—The United States minister forwards to the Secretary of State the following report of the proceeding of the sanitary council at Teheran, September 17, 1889:

REGULATIONS ADOPTED BY THE GOVERNMENT AND SUBMITTED TO SANITARY COUNCIL FOR ITS CONSIDERATION.

1. *Rules govering arrivals by sea.*

Every ship coming from Bassorah or Schatil-Arab to Persian ports must cast anchor 1,000 zars (a zar equals 41 inches) from land, and the health officer or person appointed must go by skiff to the ship, and, within 20 zars of the ship, halt and ask of the captain if he has any cases of cholera or other infectious diseases on board, and as to whether there are any invalids on board the ship, whether there have been any cases of cholera on board, and whether any one has died, and of

what cause, and so in like manner to ascertain the quality of the cargo of the ship, especially to ascertain whether wool, cotton, skins, or leather are part of the cargo or not, also learn the state of the ship as to cleanliness, and assure himself of the truth of the statements made by the captain. If no illness exists on board the ship, and no history can be obtained of any contagious disease on board, and the ship contains none of the above-mentioned articles as part of her cargo, then she shall be detained fifteen days, after which the cargo and passengers may be landed, provided no cases of cholera have occurred during the fifteen days, and on condition that the four articles mentioned are not in her cargo, otherwise she is not permitted to land passengers or cargo, and must proceed to some island distant from Fars, (province of Persia bordering on the gulf), and between which island and Fars there is no communication. There the cargo must be taken from the ship and aired thoroughly, and afterwards fumigated with sulphur. If cholera has occurred among the passengers, their clothing and effects, as far as possible, must be burned, otherwise to be thoroughly cleansed, and after the ship remaining in quarantine one month, the ship itself to be thoroughly cleansed and fumigated, after which she will be permitted to enter Persian ports. These directions must be strictly carried out especially on those ships which are not clean and are without a ship's surgeon.

2. *Directions for prevention of spread of cholera by land.*

The main route for charrodars or pilgrims to be via Khanakin. The Persian Government having established quarantine at Kasr-ih-Shireen, all travelers are obliged to stop there ten days and submit to regulations laid down. They will be examined by the physician appointed to take charge of the quarantine, and if during the ten days no evidence exists of cholera, the personal effects of the travelers will be put into heated ovens of proper temperature for as long a time as is thought necessary to cleanse them, afterwards to be fumigated with sulphur, and the travelers will then be permitted to go on their way. If, however, during these ten days any cases of cholera occur, they are to be isolated at some distant place and there treated. Convalescence occurring, they will be detained one month, and then permitted to go on their way; their personal effects, so far as possible, to be burned, otherwise to be put into hot ovens and afterwards fumigated with sulphur. If in a caravan wool, cotton, and skins, or leather are found, they are to be carefully spread out in an open space and there aired several days and fumigated. The water-closets in proximity to quarantine quarters must be cleansed daily, and washed with a lime solution, and a solution of lime and sufficient quantity of sulphate of iron and common salt to be poured into the water-closet daily.

3. *Directions for towns and villages where cholera exists.*

If cholera occurs in a house the patient must be placed where there is plenty of good air, and if possible under a tree or on a bed suspended among the branches, to be so far as possible isolated, and except the one or two nurses who are in attendance, to have no communication with others. It is also advisable that any others who occupy the house quit it and do not revisit it for fifteen days, the house itself to be thoroughly cleansed as recommended above, using, wherever practicable and possible, lime water, sulphur, copperas, and salt. Should cholera occur among others, they, too, are to be isolated and treated in the same manner, and the house to be thoroughly cleansed and its con-

tents aired for fifteen days, lime water being sprinkled over the walls, floors, and ceilings, and the house to remain empty twenty to thirty days. Should cholera break out in several houses the same general directions are to be carried out in each case, and others to be forbidden access to the said locality or to any of the houses in the infected districts. In the non-infected districts every precaution as to cleanliness is to be observed, and fumigation, etc., to be carried out to prevent the further spread of the disease, and further, that if it be possible those in the vicinity should remove and live in tents and under trees.

In the cities, should the cholera break out, the same general directions are recommended and should be enforced, and the inhabitants should dwell at a distance of 8 to 12 miles from the city, living in tents and on beds and having no more communication with each other than possible, should refrain from eating fruit, and maintain an abstemious diet.

The health officer, assisted by the police, to have the streets and thoroughfares cleansed regularly, and maintain the strictest cleanliness among the butcher shops.

It is recommended that several copies of these directions be sent to the officers in charge of the frontiers until such time as fuller directions may be given and printed.

To those who have passed the quarantine it is recommended that a passport be given, which shall show that they have conformed thereto in every particular, so that they may not be hindered in their journey. That consequently those who do not possess such passport shall be required to return and go through the prescribed quarantine.

The price of the passport and the expenses connected with the quarantine is with the Persian Government. Those representing the Government having the right to collect the fees, which should not exceed 1 kran per diem for travelers, and 5 shohis per diem for animals.

If the poor are charged nothing it would be a great charity.

The price of passport to be 2 krans.

The above is translated by Dr. W. W. Torrence, of Teheran, who futher reports that—

The latest telegram concerning cholera, is as follows, from the English agent at Kermanshah :

"KERMANSHAH, *September* 16, 1889.

"The epidemic, according to telegraphic information, has appeared at Bankooreh, Kalehih-Moalleen, Kasri-Sar-eh, Pul of Kirind. Four or five deaths occur daily."

The above mentioned is about midway between Kernanshah and Kasr-ih-Shireen (Persian frontier).

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Oct. 26	5,642,015	.....	.....	.....	.....	1	21	36	44	22	.....
Paris	Oct. 26	2,260,945	922	.....	.....	1	.....	16	2	21	6	6
Paris	Nov. 2	2,260,945	940	.....	.....	3	.....	22	4	23	19	.....
Glasgow	Oct. 26	545,678	236	.....	.....	.....	.....	4	2	6	.....	.....
Warsaw	Oct. 19	445,770	197	.....	.....	30	.....	19	3	9	.....	.....
Amsterdam	Oct. 26	399,051	140	.....	.....	.....	.....	1	1	5	.....	.....
Rio de Janeiro	Oct. 19	350,000	236	.....	.....	27	6	4	.....	.....	.....	.....
Palermo	Oct. 26	250,000	62	.....	.....	.....	.....	.....	6	.....	.....	.....
Belfast	Oct. 26	229,622	96	.....	.....	.....	.....	4	.....	.....	.....	.....
Genoa	Oct. 26	180,391	82	.....	.....	1	4	.....	.....	1	.....	.....
Trieste	Oct. 19	154,500	65	.....	.....	.....	.....	3	.....	1	.....	.....
Rotterdam	Oct. 26	145,102	77	.....	.....	.....	.....	1	.....	.....	.....	.....
Stuttgart	Oct. 26	125,510	33	.....	.....	.....	.....	.....	.....	1	.....	.....
Pernambuco	Oct. 15	120,000	67	.....	.....	.....	1	.....	1	.....	.....	.....
Pernambuco	Oct. 22	120,000	88	.....	.....	.....	.....	1	1	.....	.....	.....
Havre	Oct. 26	112,074	50	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barmen	Oct. 19	109,000	22	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barmen	Oct. 26	109,000	41	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Oct. 12	65,802	28	.....	.....	.....	.....	.....	3	.....	.....	.....
Mayence	Oct. 19	65,802	24	.....	.....	.....	1	.....	1	5	.....	.....
Cadiz	Oct. 26	57,157	56	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Oct. 31	23,800	28	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Oct. 27	23,681	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Nov. 8	18,284	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Oct. 25	15,000	15	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Oct. 26	7,428	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Nov. 2	7,428	6	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Aug. 26	1,250	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Sept. 2	1,250	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Sept. 9	1,250	1	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Sept. 16	1,250	2	.....	.....	.....	.....	.....	.....	.....	.....	.....

NOTICE.—The following numbers of the present volume of abstracts are desired to complete a number of files in the Marine Hospital Bureau. Medical officers of the service, and others who receive the abstracts, who do not keep permanent files, will confer a favor by forwarding to the Bureau the numbers indicated. Officers of the Marine-Hospital Service, however, will not break the official files at the stations.

The desired numbers are numbers 7, 9, and 24 of the current volume.

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 48. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., November 29, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended November 29, 1889, published in accordance with section 4, Act of Congress, approved April 29, 1878.

UNITED STATES.

Special Reports.

YELLOW FEVER—*Key West, Fla.*

BULLETIN NO. 5, STATE BOARD OF HEALTH OF FLORIDA.

JACKSONVILLE, FLA., *November 16, 1889.*

The occurrence of two more cases of yellow fever at Key West, Fla., on the 15th instant, after an interval of exemption of twenty-six days, requires a re-enacting of the restrictions on travel and surveillance of passengers from that place which were removed on the 11th instant, and announced in Bulletin No. 4 from this office; accordingly, it is forbidden for persons to leave the island of Key West without an acclimation certificate from me or from my legally appointed representative at that place, for any point on the main-land of Florida, and captains of all vessels leaving the port or island of Key West are forbidden to take as a passenger any person not having such certificate or permit, and they are likewise forbidden to enter any of the ports of the State of Florida without a permit from me or from my representative at Key West, so to do.

* * * * * * *

The occurrence of these last two cases in Key West demonstrates satisfactorily to my mind that the city is infected. The locality, or localities, from which the infection has been drawn have, of course, not been satisfactorily determined upon, nor am I able to state at present in what way the germ of the disease has been imported into Key West.

It is, I trust, fully comprehended that the restrictions on travel from Key West and the fumigation of baggage arriving from that island at other sea-ports are sufficient safeguards at this period to prevent the introduction from there to the main-land of yellow-fever infection.

JOSEPH Y. PORTER, M. D.,
Health Officer State of Florida.

CEREBRO-SPINAL MENINGITIS.—The following report has been received:

PORT OF EVANSVILLE, IND.,
Surgeon's Office, November 23, 1889.

SIR: I have the honor to inclose a clipping from the *Evansville Courier* of this date in regard to an endemic of cerebro-spinal fever now prevailing in Webster County, and to inform you that I have two cases under treatment in the marine ward of the city hospital—these cases having been received from the steamboat Joe Fowler, which runs between this city and Paducah, Ky.

Very respectfully,

GEORGE T. VAUGHAN,
Assistant Surgeon, Marine-Hospital Service.

To the SUPERVISING SURGEON-GENERAL M. H. S.

Reports of States, and Yearly and Monthly Reports of Cities.

ILLINOIS—*Peoria.*—Month of October, 1889. Population, 40,000. Total deaths, 47; including diphtheria, 1.

IOWA—*Davenport.*—Month of October, 1889. Population, 33,715. Total deaths, 21; including diphtheria, 4.

MICHIGAN.—Reports to the State board of health, Lansing, from 65 observers, indicate that for the week ended November 16, 1889, cholera infantum, cholera morbus, erysipelas, measles, and scarlet fever increased, and cerebro-spinal meningitis, membraneous croup, remittent fever, and enteric fever decreased, in area of prevalence.

Diphtheria was reported present during the week, and since, at 38 places; scarlet fever at 33 places; enteric fever increased 26 per cent., and was present at 49 places; and measles increased 29 per cent., and was reported at 9 places.

MINNESOTA—*Minneapolis.*—Month of October, 1889. Population, 200,000. Total deaths, 207; including enteric fever, 18; diphtheria, 31; scarlet fever, 4; and whooping-cough, 2.

NEW HAMPSHIRE.—The official organ of the State board of health, the *Sanitary Volunteer*, announces that diphtheria prevails in several parts of the State, and that, upon application, the board of health will mail to any address a pamphlet relating to the prevention and restriction of diphtheria.

The following contagious and infectious diseases were reported to the board for the month of October:

Diphtheria: Manchester 14, Acworth 2, Canaan 3, Nashua 1, Canterbury 1, Rochester 1, Marlow 3, Walpole 1, Claremont 5, and Keene 48, with 12 deaths. This makes 73 cases of diphtheria in Keene since the 1st of September. The health officer says, "Private funerals have been ordered, prophylactic measures enforced as much as possible, and in some cases attendants have been furnished for the sick."

Scarlet fever: Manchester 14, Concord 3, Canaan 1, Keene 2, Tilton 6, and Hooksett 2.

Typhoid fever: Manchester 3, Concord 3, Henniker 1, South Newmarket 3, Nashua 9, Canterbury 1, Rochester 1, Laconia 2, Pittsburg 1, Weare 1, and Amherst 2.

RHODE ISLAND—*Newport.*—Month of October, 1889. Population, 22,000. Total deaths 21, including enteric fever 2.

TENNESSEE.—Month of October, 1889. The State board of health bulletin, dated November 20, contains an account of the recent proceedings of the American Public Health Association at Brooklyn, reported by the delegate, the president of the board, S. J. D. Plunket: also accredited articles upon general sanitary topics, and a translation from the *Revue Medico-Pharmaceutique*, Constantinople, of a report upon cholera in Mesopotamia.

The principal diseases during October, named in the order of their greater prevalence, were malarial fever, pneumonia, dysentery, consumption, bronchitis, tonsillitis, cholera infantum, diarrhœa, and rheumatism. Enteric fever occurred in 21 counties, diphtheria in 8, and scarlet fever in 6. Ninety-six counties are enumerated, with health reports from 36. From 49 counties having health officers no reports were received, and 11 counties are reported as having no health officer.

The deaths in 5 cities having an aggregate population of 209,606, numbered 307; including enteric fever, 15; diphtheria and croup, 10; scarlet fever, 1; whooping-cough, 1. The bulletin concludes with a report of the meteorological department of the State board of health, compiled from the reports of 37 voluntary observers in different sections of the State.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Nov. 23	1,590,159	612	.....	.....	.....	.....	.....	.....	10	5	14	6	7
Brooklyn, N. Y.	Nov. 23	843,602	291	.....	.....	.....	.....	.....	.....	2	2	21	.....	1
Baltimore, Md	Nov. 23	500,343	140	.....	.....	.....	.....	.....	.....	4	1	.....	.....	.....
St. Louis, Mo.	Nov. 16	450,000	149	.....	.....	.....	.....	.....	.....	5	7	8	.....	.....
Boston, Mass.	Nov. 23	420,000	168	.....	.....	.....	.....	.....	.....	7	.....	14	.....	1
San Francisco, Cal.	Nov. 15	330,000	118	.....	.....	.....	.....	.....	.....	6	1	3	.....	1
Cincinnati, Ohio	Nov. 23	325,000	114	.....	.....	.....	.....	.....	.....	3	1	12	.....	.....
New Orleans, La.	Nov. 16	254,000	114	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Washington, D. C.	Nov. 16	250,000	99	.....	.....	.....	.....	.....	.....	5	.....	4	.....	.....
Detroit, Mich.	Nov. 16	250,000	65	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	.....
Pittsburgh, Pa.	Nov. 16	230,000	93	.....	.....	.....	.....	.....	.....	5	1	10	.....	.....
Pittsburgh, Pa.	Nov. 23	230,000	92	.....	.....	.....	.....	.....	.....	.....	2	9	1	.....
Louisville, Ky.	Nov. 23	227,000	34	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minneapolis, Minn.	Nov. 23	200,000	40	.....	.....	.....	.....	.....	.....	.....	2	7	.....	.....
Kansas City, Mo.	Nov. 16	180,000	39	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....
Kansas City, Mo.	Nov. 23	180,000	34	.....	.....	.....	.....	.....	.....	.....	1	1	.....	1
Rochester, N. Y.	Nov. 23	130,000	36	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Providence, R. I.	Nov. 23	127,000	45	.....	.....	.....	.....	.....	.....	3	.....	2	.....	.....
Indianapolis, Ind.	Nov. 22	124,450	32	.....	.....	.....	.....	.....	.....	4	.....	1	.....	.....
Richmond, Va.	Nov. 16	100,000	32	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Richmond, Va.	Nov. 23	100,000	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toledo, Ohio	Nov. 23	89,000	30	.....	.....	.....	.....	.....	.....	.....	.....	7	.....	1
Fall River, Mass.	Nov. 23	69,000	14	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Nashville, Tenn.	Nov. 23	65,153	26	.....	.....	.....	.....	.....	.....	2	.....	.....	.....	.....
Charleston, S. C.	Nov. 23	60,145	39	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Manchester, N. H.	Nov. 16	42,000	15	.....	.....	.....	.....	.....	.....	1	.....	.....	2	.....
Portland, Me.	Nov. 23	42,000	12	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
San Diego, Cal.	Nov. 13	32,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yonkers, N. Y.	Nov. 22	31,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	Nov. 16	30,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Nov. 23	30,000	7	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Auburn, N. Y.	Nov. 23	26,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Nov. 23	25,000	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Newton, Mass.	Nov. 16	21,553	6	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Newton, Mass.	Nov. 23	21,553	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	Nov. 16	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Nov. 17	16,000	4	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Pensacola, Fla.	Nov. 16	15,000	8	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended November 9 corresponded to an annual rate of 18.1 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Birkenhead, viz, 12.2, and the highest in Plymouth, viz, 26.0 a thousand. Diphtheria caused 2 deaths in Plymouth.

London.—One thousand three hundred and fifty deaths were registered during the week, including small-pox, 1; measles, 20; scarlet fever, 23; diphtheria, 23; whooping-cough, 24; enteric fever, 11; diarrhœa and dysentery, 17; and cholera, 1. The deaths from all causes corresponded to an annual rate of 16.2 a thousand. Diseases of the respiratory organs caused 318 deaths. In greater London 1,694 deaths were registered, corresponding to an annual rate of 15.7 a thousand of the population. In the "outer ring" the deaths included measles, 6; scarlet fever, 5; and diphtheria, 10.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended November 2, in the 16 principal town districts of Ireland, was 22.3 a thousand of the population. The lowest rate was recorded in Drogheda and Kilkenny, viz, 4.2, and the highest in Dublin, viz, 26.1 a thousand. In Dublin and suburbs 185 deaths were registered, including scarlet fever, 1; enteric fever, 9; diarrhœa, 5; dysentery, 2; and typhus fever, 1.

Malta and Gozo.—Three hundred and fourteen deaths were registered during the month of September, 1889, including diphtheria, 6; enteric fever, 4; dysentery, 3, and whooping-cough, 1.

Calcutta.—Nine hundred and ninety deaths were registered during the month of August, 1889, against 960 in the preceding month. The proportion of male to female deaths was as 122 to 100. There were 35 deaths from cholera, against 73 in the preceding month, and 2 deaths from small-pox. Fevers caused 333 deaths; bowel complaints, 114. There were 117 deaths from tetanus during the month, of which 110 were infants under 1 year.

Decennial statement of deaths from principal diseases.

[Census of 1881, 433,219.]

Period.	Cholera.	Small-pox.	Fevers.	Bowel complaints.	Injury.	All other causes.	Total exclusive of still births.	Annual ratio per 1,000 of population.
1879	56	7	272	146	18	301	800	22.1
1880	17	3	216	70	20	397	723	22.0
1881	49	1	260	95	13	390	808	22.3
1882	54	2	255	95	31	410	847	23.4
1883	38	2	224	62	16	396	738	20.4
1884	54	23	258	73	16	358	782	21.6
1885	131	5	263	113	15	433	960	26.5
1886	95	3	251	82	23	343	797	22.0
1887	79	.....	221	71	9	379	759	21.0
1888	54	2	181	54	16	413	720	19.9
Mean numbers	63	5	240	86	18	382	794	22.0
1889	35	2	333	114	16	490	990	27.4

Singapore.—Five hundred and seventy-four deaths were registered during the month of August, 1889, including fevers, 164; bowel complaints, 93; and beri-beri, 5. Four hundred and eighty-five deaths were registered during the month of September, 1889, including fevers, 121; bowel complaints, 60; small-pox, 1; and beri-beri, 38.

NETHERLANDS.—The deaths registered in the principal cities of the Netherlands, having an aggregate population of 1,054,720, corresponded to an annual rate of 19.1 a thousand. The lowest rate was in Leeuwarden, viz, 13.9, and the highest in Hertogenbosch, viz, 27.8. The deaths included measles, 13; enteric and typhus fevers, 11; scarlet fever, 5; croup, 15; whooping-cough, 23; diphtheria, 20; diarrhœa and dysentery, 28, and cholera nostras, 2.

BRAZIL—*Bahia.*—The United States consul, under date of October 21, 1889, reports that the sanitary condition of the city and adjacent country is good, with the exception of a few cases of small-pox. There is still much suffering reported from the interior on account of the lack of sufficient rain.

Rio de Janeiro.—Four hundred and seventy deaths were registered during the two weeks ended November 2, 1889, including yellow-fever, 5; small-pox, 41; enteric fever, 6; and typhus, 12. The United States consul says that "yellow-fever has nearly disappeared. Small-pox is confined to the filthy quarters of the city. The general health is very good."

Paramaribo.—Eighty-two deaths were reported during the month of September, 1889, including malignant fever, 5.

UNITED STATES OF COLOMBIA—*Cartagena.*—Sixty-two deaths were registered during the period from August 24 to October 12, 1889. None from contagious diseases.

MEXICO—*Guaymas.*—Twenty-six deaths were registered during the month of October, 1889. No particular diseases. Sanitary condition of city, good.

CUBA—*Cardenas.*—November 16, 1889. Good health; weather dry; cool mornings, and warm until midnight.

HAYTI—*Cape Haytien.*—Fifty-two deaths were registersd during the period from September 14 to November 9, 1889, including none from contagious diseases.

DANISH WEST INDIES—*St. Thomas.*—Six hundred and seventy-two deaths were registered during the third quarter of 1889, including dysentery, 33; whooping-cough, 4; intestinal catarrh and diarrhœa, 131, and erysipelas, 2.

BAHAMAS—*Nassau, N. P.*—November 9, 1889. City is healthy. Number of deaths never reported.

PROPHYLAXIS AGAINST TUBERCULOSIS.

[Translated for this Bureau from *La Pratique Médicalé*, Paris.]

In the name of a commission composed of Messrs. Verneuil, Germain, Sée, Dujardin-Beaumetz, Cornil, and Villemin, reporter, the latter read a report on the prophylaxis of tuberculosis, a report which terminates with the following conclusions:

I. Tuberculosis is of all diseases that which numbers most victims. In the large cities it counts for one-fourth to one-seventh in the mortality. To explain this high rate it must be borne in mind that pulmonary phthisis is not the only manifestation of tuberculosis, as the public wrongly believe. Indeed, in numbers of cases, bronchitis, pleurisy, meningitis, peritonitis, enteritis, osseous and articulary lesions, cold abscesses, etc., are maladies of the same nature.

II. Tuberculosis is an infections, parasitic disease, caused by a microbe, but it is transmissible to a healthy individual by an ill subject only under special conditions which we will proceed to determine.

Independently of direct hereditary transmission, the microbe of tuberculosis penetrates into the organism by the ærial passages with the air we breathe, by the digestive canal with food, by the skin and the mucous membranes, by excoriations, pricks, wounds, and diverse ulcerations.

III. The most frequent source of contagion and the most to be dreaded is the spittle of consumptive patients. Almost inoffensive while it is in a liquid state, it is when reduced to powder that it becomes dangerous. It quickly takes this form when projected on the soil, on floors, pavements, walls; when it sullies clothing, blankets, bedding, carpets, curtains; when recived into handkerchiefs, napkins, etc. It is then that, dry and pulverulent, it is set in motion by sweeping and dusting, by beating and brushing stuffs, furniture, blankets, clothing. This dust,

suspended in the air, penetrates the respiratory channels, is deposited on cutaneous and mucous surfaces deprived of their epidermic varnish; on utensils used in the preparation of food, and thus becomes a permanent menace to persons living in an atmosphere thus contaminated.

The contagious principle of tuberculosis is contained also in the dejections of the consumptive, whether it comes from the intestinal lesions so frequent in this disease, or from the spittle swallowed by the patients. Very frequently these latter are attacked by diarrhoea, soil their bed-clothing and linen, and thus create a source of infection against which it is necessary to guard.

Consequently, it is necessary:

(1) To be thoroughly convinced of the necessity for the greatest precaution with regard to the substance in the expectoration of consumptives. It should always and everywhere be received into spittoons containing a certain quantity of liquid, and not pulverulent material, such as sand, bran, and ashes. These should be emptied every day into the fire and cleansed with boiling water. They should never be emptied on muck piles, nor into courts or gardens, where they might tuberculorize the poultry eating there. The use of spittoons should not be confined to hospitals and private houses, but the adoption of them in all public buildings, barracks, workshops, depots, and all other places of meeting, is indispensable.

(2) Not to allow linens soiled by dejections of tuberculous persons to dry, but to soak it in boiling water before sending it to the wash, or else to burn it.

(3) To avoid sleeping in the bed of a tuberculous person, and to occupy the same room as little as possible if minute precautions have not been taken against his spittle and the soil of linen by his dejections.

(14) To have rooms in hotels, furnished houses, cottages, villas, etc., occupied by consumptives at sea-side and winter resorts furnished and carpeted and curtained in such a manner that disinfection may be readily and thoroughly performed after the departure of each invalid. The public is the first to prefer dwellings in which such hygienic precautions are observed.

(15) Not to make use of articles contaminated by tuberculous persons (linen, bed-clothes, clothing, toilet articles, hangings, furniture, toys), except after preliminary disinfection by steam under pressure, ebullition, sulphur vapor, and coating with lime.

IV. If the spittle of consumptives and their alvine secretions are the most frequent origin of acquired tuberculosis, they are not the sole origin. The parasite of the disease may be found in milk, in the meat and blood of diseased animals which serve as food for men (beef, especially of the cow, hare, poultry, etc.).

(1) Milk, of the supply of which the least is generally known, should especially receive the attention of mothers and nurses, because of the aptitude of children to contract tuberculosis. (In Paris there die annally 2,000 tuberculous persons aged less than two years.) The tuberculous mother should not nurse her infant; she should confide it to a healthy nurse living in the country, in a house in which there are no consumptive persons, where, with the best hygenic conditions, the risks of tuberculous contagion are much less than in cities.

Breast nourishment being unattainable, if it is replaced by cow's milk, this should always be boiled. Asses milk and goat milk, unboiled, present infinitely less danger.

(2) The meat of tuberculous animals should be prohibited. The public has every interest in seeing that the inspection of meat, required by law, should be rigorously exercised.

(3) The practice of drinking blood at the slaughter-houses is dangerous. It is also inefficacious.

V. All individuals have not the same degree of aptitude for contracting tuberculosis. There are subjects especially predisposed to it who should redouble precautions to avoid the circumstances favorable to contamination which we have pointed out above. These are:

(1) Persons born of tuberculous parents or belonging to families which number many members attacked by tuberculosis.

(2) Those who are debilitated by privations or excesses. The abuse of alcoholic liquors is particularly disastrous.

(3) Individuals attacked by or convalescing from measles, scarlet fever, small-pox, and above all, diabetes, are also predisposed to tuberculosis.

THE BACILLUS OF TETANUS.

By Dr. S. Kitosato.

[Translated for this Bureau from the *Zeitschrift für Hygiene*, November 7, 1889.]

CONCLUSIONS.

1. Tetanus is an infectious disease caused by a specific bacillus.

2. The exciting cause of tetanus occurring in man, and of tetanus, when inoculated, is some bacillus which is identical with the "anærobic" bacillus first described by Nicolaier, and later confirmed by Rosenbach and others.

3. This bacillus appears both in the wound-pus of tetanic persons and of inoculated animals. It frequently produces spores in the pus, but if the pus is examined early it may often be seen as a small rod free from spores.

4. Pure cultures of these bacilli can be made from the pus of tetanic patients or animals, and inoculations from these cultures will produce tetanic symptoms in other animals.

5. The former statements, apparently contradictory, concerning the etiology of tetanus, and particularly regarding the appearance of the bacteria, are made clear by the fact that the investigations were made at different stages of the disease. The sooner patients or animals die the less likely are spores to be found in the pus. But the bacilli themselves are never wanting, and spore forming tetanus bacilli can always be artifically cultivated from tetanic pus that is free from spores.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Nov. 2	5,642,015	1,647	.....	.....	.....	.....	19	28	41	29	.....
London	Nov. 9	5,642,015	1,694	.....	.....	1	.....	11	28	33	26	.....
Paris	Nov. 2	2,260,945	879	.....	.....	.....	.....	10	7	22	10	4
Paris	Nov. 9	2,260,945	899	.....	.....	1	.....	11	2	16	17	4
Glasgow	Nov. 2	545,678	241	.....	.....	.....	.....	2	2	2	.....	.....
Glasgow	Nov. 9	548,678	245	.....	.....	.....	.....	2	4	2	.....	.....
Warsaw	Oct. 26	445,770	262	.....	.....	47	.....	.....	6	15	.....	.....
Warsaw	Nov. 2	445,770	268	.....	.....	45	.....	.....	10	10	.....	.....
Calcutta	Sept. 28	433,219	220	6	.....	.....	.....	.....	.....	.....	.....	.....
Calcutta	Oct. 5	433,219	206	4	.....	.....	.....	.....	.....	.....	.....	.....
Calcutta	Oct. 12	433,219	213	5	.....	.....	.....	.....	.....	.....	1	.....
Amsterdam	Nov. 2	399,051	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Amsterdam	Nov. 9	399,051	158	.....	.....	.....	.....	.....	1	8	.....	.....
Copenhagen	Oct. 12	307,000	97	.....	.....	.....	.....	.....	2	5	.....	.....
Copenhagen	Oct. 19	307,000	98	.....	.....	.....	.....	.....	1	3	.....	.....
Copenhagen	Oct. 26	307,000	92	.....	.....	.....	.....	2	1	8	.....	.....
Copenhagen	Nov. 2	307,000	96	.....	.....	.....	.....	1	1	12	.....	.....
Edinburgh	Oct. 5	266,900	91	.....	.....	.....	.....	1	1	3	.....	.....
Edinburgh	Oct. 12	266,900	82	.....	.....	.....	.....	.....	.....	5	.....	.....
Palermo	Nov. 2	250,000	65	.....	.....	.....	.....	.....	1	.....	.....	.....
Palermo	Nov, 9	250,000	74	.....	.....	.....	.....	.....	.....	1	.....	.....
Bristol	Oct. 26	229,361	62	.....	.....	.....	.....	.....	1	.....	.....	.....
Rotterdam	Nov. 2	197,724	69	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rotterdam	Nov. 9	197,724	77	.....	.....	.....	.....	1	.....	1	.....	.....
Genoa	Nov. 2	180,398	98	.....	.....	.....	.....	6	.....	1	.....	.....
Genoa	Nov. 9	180,398	99	.....	.....	.....	3	.....	.....	1	.....	.....
Toronto	Nov. 9	175,000	59	.....	.....	.....	.....	1	.....	.....	.....	.....
Toronto	Nov. 16	175,000	37	.....	.....	.....	.....	2	.....	1	.....	.....
Trieste	Oct. 26	154,500	67	.....	.....	.....	.....	1	2	4	.....	.....
Trieste	Nov. 2	154,500	50	.....	.....	.....	.....	1	1	1	.....	.....
Stuttgart	Nov. 2	125,510	33	.....	.....	.....	1	.....	.....	3	.....	.....
Stuttgart	Nov. 9	125,510	43	.....	.....	.....	.....	.....	.....	1	.....	.....
Havre	Nov. 2	112,074	55	.....	.....	.....	.....	2	.....	2	.....	.....
Havre	Nov. 9	112,074	46	.....	.....	.....	.....	3	1	1	.....	.....
Barmen	Nov. 2	109,000	41	.....	.....	.....	.....	.....	.....	1	2	.....
Catania	Oct. 28	108,000	58	.....	.....	.....	.....	1	1	1	.....	.....
Catania	Nov. 4	108,000	66	.....	.....	.....	.....	1	1	1	.....	.....
Leghorn	Nov. 10	103,287	51	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rheims	Oct. 26	97,903	44	.....	.....	.....	.....	6	.....	1	2	.....
Rheims	Nov. 2	97,903	44	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leith	Oct. 5	76,400	30	.....	.....	.....	.....	.....	.....	4	.....	.....
Leith	Oct. 12	76,400	29	.....	.....	.....	.....	.....	1	1	.....	.....
Mayence	Oct. 26	65,802	31	.....	.....	.....	.....	.....	2	1	.....	.....
Cadiz	Nov. 2	57,157	48	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Oct. 28	47,448	48	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Nov. 4	47,448	45	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Nov. 7	23,800	22	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Nov. 3	23,681	8	.....	.....	.....	.....	1	.....	2	.....	.....
Kingston, Can	Nov. 15	18,284	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Nov. 16	7,428	4	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 49. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., December 6, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended December 6, 1889, published in accordance with section 4, Act of Congress, approved April 29, 1878.

NOTICE.—Copies of Abstract No. 24, June 14, 1889, are desired to complete sets of the present volume. Persons who can spare the same without breaking permanent files will confer a favor by forwarding to this Bureau.

UNITED STATES.

Special Reports.

STATE QUARANTINE RESTRICTIONS.—The following notice has been received:

STATE BOARD OF HEALTH OF FLORIDA.
Jacksonville, Fla., November 30, 1889.

Whereas the quarantine season established by order of the State board of health of Florida expires this day, notice is hereby given that on and after December 1 restrictions on travel are removed, except that no bedding or other household goods will be permitted to be brought into or transported in the State of Florida from Havana or other infected points without being subjected to thorough disinfection at port of entry or place of arrival of said goods.

R. P. DANIEL,
President State Board of Health.

JOSEPH Y. PORTER,
State Health Officer.

PREVENTION OF CONSUMPTION.—A circular issued by the State board of health of Maine, after describing the nature and mode of transmission of tuberculosis, concludes with the following directions for prevention:

It should be impressed upon consumptive patients and other persons living with them that the sputum (which they cough up) is dangerous and must be properly disposed of.

The sputum should be received in a spit-cup or spittoon containing a little water or disinfecting fluid, and must never be spit upon floors, carpets, or received in handkerchiefs. If a disinfecting solution is used, corrosive sublimate is unsuitable; chloride of lime is efficient but irritates the air passages; carbolic acid with 5 per cent. of tartaric acid or hydrochloric acid will be the best disinfectant generally available.

If occasionally it is necessary to have handkerchiefs or cloths soiled with the sputum they should be boiled as soon as possible, and before drying.

The spittoon should be of such shape that the sputum may easily fall into the water without soiling the sides of the vessel. For patients not able to sit up, a small spit-cup with a handle should be used. When flies are present, it should be covered.

Spit-cups and spittoons should be emptied and cleansed often with boiling water and potash soap. When the house has a drainage system, the contents may be poured down the water-closet or slop-hopper; when it has not, they should be buried in ground which will not be turned up soon.

The sputum should not be thrown out upon the surface of the ground near inhabited places, nor on manure heaps, nor where animals may get it, nor where it may soil animal food.

Boxes filled with sand or sawdust should not be used. Cheap wooden and pasteboard spit-cups are now on the market, one of which may be burned daily or oftener with its contents as a convenient way of disposing of the sputa.

A pocket spit-flask of small size has been devised, which may be used while away from home.

The floors, wood-work and furniture of rooms in which consumptive patients stay should be wiped with a damp cloth; not dusted in the usual way.

The patients' clothing should be kept by itself and thoroughly boiled at the washing.

The patient should be made to understand that in neglecting these measures he is imperiling his friends, and at the same time diminishing very much his own chances of recovery by re-infecting himself with the inhalation of his own dried and pulverized sputum.

After a death from this disease has occurred, the patient's room, clothing, and bed should be disinfected. For this purpose boil all bed and personal clothing, or disinfect them while practicable in a steam disinfector; wash furniture, wood-work, walls, and floors with carbolic acid, and thoroughly expose the rooms to light and air.

If raw milk is used as food, especially if it is to be given to children, an assurance should be had that the cows which produce it are perfectly healthy and subjected to healthful treatment.

When there is any doubt as to the health of the cows which furnish the supply, the milk should be boiled before use.

Thorough cooking will remove all danger of tuberculosis through the medium of the meat supply.

Tuberculous mothers and those inclined to consumption should, under no conditions, nurse their babies.

By observing the rules which are expressed and suggested in the foregoing, the principal if not all danger of infection may be avoided.

FLORIDA.—The following regulations have been published by the board of health of the county of Escambia, dated Pensacola, November 19, 1889:

1. The port inspector shall visit and inspect every vessel entering the bay of Pensacola and ascertain and report her sanitary condition; and until such inspection and report, and the release of such vessel by said officer, no person shall visit her, and no person from her shall visit any other vessel or the shore. The master or owner of each vessel so inspected shall pay to this board for such service five dollars.

2. No vessel coming into the port of Pensacola, having on board any contagious or infectious disease, or from a port where any such disease prevails, shall remain within the territory under the jurisdiction of this board, except at a point designated and under restrictions imposed by this board, according to the exigencies of each case.

3. It shall be the duty of any person coming into the county of Escambia or port of Pensacola from any locality where any disease in an epidemic form prevails, to report at once to this board or some officer thereof, and no person coming from any such locality shall remain in said county without the permit of this board, and then only at such point as may be designated, and under such restrictions as may be imposed by this board, according to the exigencies of each case.

4. No ballast brought into the bay of Pensacola by vessels shall be discharged in the county of Escambia, or the waters separating that county and the county of Santa Rosa, except at such point as may be designated in a permit obtained from this board or granted on its authority; and in case this board or its sanitary inspector or other officer with approval of this board deem it expedient for the preservation of the public health to require fumigation, disinfection, or discharge of ballast at quarantine station the same shall be done at the expense of the vessel, and in accordance with the system in use by this board.

5. All pilots and tow-boats of the port of Pensacola shall be supplied with copies of these rules, and every pilot or tow-boat master speaking or boarding a vessel coming into said port shall hand a copy thereof to the master of said vessel.

6. In case any vessel shall be required, by authority of this board in the exercise of its powers to preserve the public health, to discharge ballast at quarantine station or be fumigated, she shall pay 25 cents per ton for the ballast discharged, and for the fumigation shall pay as follows: steam-ships, $75; ships, $50; barks and other vessels, other than brigs and two-masted schooners, $40; brigs, $20; two-masted schooners, $15.

7. No pilot, tow-boatman or other person shall remove, transfer, or receive, or assist in removing, transferring, or receiving any person from any vessel entering the bay of Pensacola, until such vessel shall have been inspected and released by the port inspector.

JOHN W. FRATER,
President.

WM. FISHER,
Secretary and Treasurer.

IOWA—*Keokuk.—Diphtheria.*—The following bulletins have been published concerning the importation into Keokuk from Memphis, Mo., of the bodies of two children who died of diphtheria:

KEOKUK, IOWA, *November* 26, 1889.

To the Public:

A statement of the facts connected with the importation of the bodies of children alleged to have died of diphtheria at Memphis, Mo., lately, seems to be necessary. November 8 the *Gate City* announced the fact. November 9 public attention was called to it by the board of health, and the laws in such cases were quoted. November 10 it appeared that the body of one of the dead had been kept at 1409 Des Moines street; that there had been a "wake;" that the lid had been removed from the coffin and the corpse exposed; that it had been deposited in the city's receiving vault; that there had been public services over the body at St. Peter's church. Inquiry of the parties interested here established all these rumors and statements.

* * * * * * *

It appears that the bodies were first wrapped with roller bandages, salt applied, and some chemical solution poured over it, before they were dressed for burial.

There are certificates from two of the consulting physicians. One says the child "Loretta did not, in my opinion, die of diphtheria or any other contagious disease." * * *

"Since the death of Loretta I have been called in consultation to see other similar cases, and * * * in my judgment they did not have diphtheria." The other consulting physician says: "I do not think that the death of those children was due to diphtheritic causes, but was the result of catarrhal exudation followed by a tonso-pharyngitic ulceration of malignant type."

The two attending physicians pronounced the disease diphtheria and the newspaper statements are uncontradicted.

Mr. Real did not see the agent of the K. and W. railway as to the transportation of the bodies; a friend saw the agent and was promptly informed that he could not take them without a certificate of a physician that they had not died of infectious disease. The bodies were then brought over by land in a wagon. The parish priest was told there was no diphtheria about the case; the clerk of the board asked no questions—as it is not required of him—and had no certificate as to cause of death when vault permit was given, but friends who called at 1409 Des Moines street had a distinct impression of diphtheria, and did not remain. Mr. Real writes, November 13: "The attending physicians called this disease diphtheria, but other physicians called in in counsel said it was not. I own a lot in the Catholic cemetery and having other children buried there, I took them there for burial with no knowledge or intention to violate any statutory laws or police regulations. I concealed nothing, told a reporter that children had died with diphtheria (so the doctor said)." The sheriff of Scotland County writes confirmatory of what is written above as to the facts in the case, and is "satisfied that any act that he may have done, if any, in violation of the law of this State or the State of Iowa was not intentionally, but through ignorance of the law."

In view of these statements it seemed to the board that to prosecute the case would not bring about any useful result; that whatever injury

had been done was without remedy; that the law had been vindicated sufficiently, and that this publication should be fair warning to the general public that the health officers would enfore the laws if they knew of any attempt at their willful infraction.

JOHN E. CRAIG,
Mayor and ex-officio chairman.
J. M. SHAFFER,
Physician to Board.

KEOKUK, IOWA, *November* 25, 1889.

There is no occasion for alarm, but it is a time for great caution and the strict observance of the rules and regulations of the board of health. Since October 31 the following have been placed under quarantine:

Thirteenth and Timea, three cases; No. 1726 Exchange, one case; No. 1618 Johnson, two cases; No. 1620 Johnson, one case; No. 1503 Morgan, two cases; Sixth and Johnson, three cases; No. 1621 Bank, three cases; No. 1503 Franklin, one case; No. 1613 Franklin, one case, and scarlet fever at Sixth and Timea and Eighth and Exchange.

People neglect the avoidance of personal intercourse, and do not realize what a potentially infectious disease diphtheria is. It is a hundred-fold more destructive than small-pox, and this domestic plague should be "hedged about, separated, secluded, and treated with the same disinfecting energy" that is used in controlling small-pox. Will you do this? Will you who are in the house stay there, and observe the rules of the health office? Will you and friends and neighbors shun the places where the contagion is, as you would shun the small-pox? There is no middle course to be taken. The separation of the sick from the well must be absolute; the disinfection and care in preventing the disease must be thorough. Quarantine means thirty-five days' isolation under the law.

J. M. SHAFFER, M. D.,
Physician to Board of Health.

MICHIGAN.—Week ended November 23, 1889. Reports to the State board of health, Lansing, from 56 observers, indicate that membranous croup and diphtheria increased, and that cholera infantum, cholera morbus, erysipelas, typho-malarial fever, pneumonia, and scarlet fever decreased, in area of prevalence.

Diphtheria was reported present during the week, and since, at 38 places; scarlet fever at 35 places; enteric fever at 52 places; and measles at 10 places.

MISSISSIPPI.—The Mississippi State quarantine at Ship Island, Miss., was closed for the winter on the 10th instant.

NEW JERSEY.—The president of the State board of health, Dr. Ezra M. Hunt, in response to an inquiry concerning the reported intention of the board to subject all hotels to a thorough sanitary examination, especially those at sea-side resorts, states as follows:

"We do propose to do more thoroughly what we have in fact done before, and in the next few months will fully investigate the actual

condition of individual hotels. Asbury Park has put itself on a distinct health basis, so that each house has a public record of its sanitary fitness, or unfitness, which can be seen by the inquirer. Our policy is to break up concealment, to let each tub stand on its own bottom, and so try to have an elongated health resort for all mankind along the Jersey coast."

Hudson County.—Month of October, 1889. Population 282,254. Total deaths, 508; including scarlet fever, 1; diphtheria, 34; whooping-cough, 3; and enteric fever, 16.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Nov. 30	1,591,057	566	.....	.....	.....	.....	.....	.....	8	8	17	3	6
Brooklyn, N. Y.	Nov. 30	843,602	292	.....	.....	.....	.....	.....	.....	8	1	23	.....	3
Philadelphia, Pa.	Nov. 30	1,040,240	360	.....	.....	.....	.....	.....	.....	7	9	16	.....	.....
Baltimore, Md.	Nov. 30	500,343	152	.....	.....	.....	.....	.....	.....	5	1	6	.....	1
St. Louis, Mo.	Nov. 23	450,000	140	.....	.....	.....	.....	.....	.....	2	3	7	.....	1
Boston, Mass.	Nov. 30	420,000	.....	.....	.....	.....	.....	.....	.....	2	.....	10	.....	.....
Cincinnati, Ohio	Nov. 30	325,000	105	.....	.....	.....	.....	.....	.....	4	.....	6	.....	2
New Orleans, La.	Nov. 23	254,000	123	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Washington, D. C.	Nov. 23	250,000	98	.....	.....	.....	.....	.....	.....	5	.....	6	.....	1
Washington, D. C.	Nov. 30	250,000	.....	.....	.....	.....	.....	.....	.....	6	.....	3	.....	.....
Detroit, Mich.	Nov. 23	250,000	65	.....	.....	.....	.....	.....	1	.....	1	10	.....	.....
Cleveland, Ohio	Nov. 2	235,000	100	.....	.....	.....	.....	.....	.....	2	.....	8	.....	1
Cleveland, Ohio	Nov. 9	235,000	97	.....	.....	.....	.....	.....	.....	3	2	9	3	2
Pittsburgh, Pa.	Dec. 3	230,000	64	.....	.....	.....	.....	.....	.....	2	.....	5	.....	.....
Minneapolis, Minn.	Nov. 30	200,000	48	.....	.....	.....	.....	.....	.....	3	.....	3	.....	.....
Rochester, N. Y.	Nov. 16	130,000	36	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Rochester, N. Y.	Nov. 30	130,000	28	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Providence, R. I.	Nov. 30	127,000	26	.....	.....	.....	.....	.....	.....	2	.....	1	1	.....
Indianapolis, Ind.	Nov. 29	124,450	32	.....	.....	.....	.....	.....	.....	6	.....	2	.....	.....
Toledo, Ohio	Nov. 29	89,000	27	.....	.....	.....	.....	.....	.....	1	1	4	.....	.....
Fall River, Mass.	Nov. 30	69,000	22	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Nashville, Tenn.	Nov. 30	65,153	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Charleston, S. C.	Nov. 30	60,145	27	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Lynn, Mass.	Nov. 23	53,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynn, Mass.	Nov. 30	53,000	13	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Manchester, N. H.	Nov. 23	42,000	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Portland, Me.	Nov. 30	42,000	11	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Galveston, Tex.	Nov. 15	40,000	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Council Bluffs, Iowa	Oct. 28	35,000	12	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....
Council Bluffs, Iowa	Nov. 5	35,000	9	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Council Bluffs, Iowa	Nov. 12	35,000	5	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Council Bluffs, Iowa	Nov. 19	35,000	7	.....	.....	.....	.....	.....	.....	1	.....	2	.....	.....
Council Bluffs, Iowa	Nov. 25	35,000	6	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
San Diego, Cal.	Nov. 20	32,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yonkers, N. Y.	Nov. 29	31,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	Nov. 23	30,000	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Binghamton, N. Y.	Nov. 30	30,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Canton, Ohio.	Nov. 22	30,000	5	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Auburn, N. Y.	Nov. 30	26,000	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Haverhill, Mass.	Nov. 30	25,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Nov. 21	22,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newport, R. I.	Nov. 28	22,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Nov. 30	21,553	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	Nov. 23	16,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa	Nov. 30	16,000	5	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Rock Island, Ill.	Nov. 24	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Nov. 23	15,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Nov. 30	15,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended November 16 corresponded to an annual rate of 18.3 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Birkenhead, viz, 11.7, and the highest in Preston, viz, 28.5 a thousand. Diphtheria caused 9 deaths in Salford and 2 in Manchester.

London.—One thousand four hundred and fifty-one deaths were registered during the week, including measles, 33; scarlet fever, 24; diphtheria, 38; whooping-cough, 37; enteric fever, 20; typhus, 1; and diarrhœa and dysentery, 16. The deaths from all causes corresponded to an annual rate of 17.4 a thousand. Diseases of the respiratory organs caused 321 deaths. In greater London 1,791 deaths were registered, corresponding to an annual rate of 16.6 a thousand of the population. In the "outer ring" the deaths included measles, 5; scarlet fever, 4; diphtheria, 12; and whooping-cough, 7.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended November 9, in the 16 principal town districts of Ireland, was 24.5 a thousand of the population. The lowest rate was recorded in Dundalk, viz, 4.4, and the highest in Belfast, viz, 27.5 a thousand. In Dublin and suburbs 178 deaths were registered, including measles, 2; scarlet fever, 1; enteric fever, 7; whooping-cough, 2; and diarrhœa, 2.

Scotland.—The deaths registered in eight principal towns during the week ended November 16, 1889, corresponded to an annual rate of 19.9 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Leith, viz, 13.6, and the highest in Perth, viz, 23.7 a thousand. The aggregate number of deaths registered from all causes was 509, including measles, 13; scarlet fever, 5; diphtheria, 16; whooping-cough, 14; fever, 5; and diarrhœa, 11.

During the quarter ended September 30, 1889, there were 16,787 deaths registered, being an annual rate of 16.3 a thousand of the population. In the eight principal towns the deaths from all causes amounted to 2,270 in July, 2,019 in August, and 1,936 in September. Measles caused 151 deaths; scarlet fever, 41; whooping-cough, 247; diphtheria, 81; fevers, 96; and diarrhœa and dysentery, 423. Diseases of the respiratory organs caused 609 deaths during the quarter.

Malta and Gozo.—One hundred and seventy-two deaths were registered during the period from the 1st to 15th of October, 1889, including whooping-cough 1 and diphtheria 2.

PERSIA—*Cholera.*—The United States minister forwards the following dispatch:

LEGATION OF THE UNITED STATES,
Teheran, October 14, 1889.

SIR: I regret to have to report that, notwithstanding the efforts on the part of the Persian Government to arrest the onward march of the cholera, it seems day by day to be advancing farther and farther into the interior; has now reached Kermanshah; is threatening Hamadan, and may at any time make its appearance at Teheran.

The Russian authorities, I am informed, are about establishing a general quarantine against arrivals from Persia at Bakon and Julfa.

I have, sir, the honor to be your obedient servant,

E. SPENCER PRATT.

Hon. JAMES G. BLAINE,
Secretary of State.

RUSSIA—*St. Petersburgh—Influenza.*—A cable dispatch in *Der Deutsche Correspondent* of November 30, 1889, states that an epidemic of influenza is now prevailing at St. Petersburgh. No deaths have as yet resulted from the disease.

CUBA—*Havana.*—For the week ended November 21, 1889, there were 9 deaths from yellow fever.

Santiago de Cuba.—Forty-six deaths were registered during the latter half of October, 1889, including small-pox, 1; yellow fever, 6; pernicious fever, 2; and diphtheria, 1. The deaths from small-pox and yellow fever were among the troops.

For the first half of November, 1889, there were 34 deaths, including yellow fever, 4, of which one was a colored person and three were troops; pernicious fever, 2; and diphtheria and croup, 4.

Cardenas.—November 20, 1889. Cool and dry weather. Good health has prevailed during the week.

BAHAMAS—*Nassau, N. P.*—November 16, 1889. City healthy. Weather pleasant and dry.

November 23, 1889. City healthy. Weather hot, sultry, and rainy.

BRAZIL—*Rio de Janeiro.*—Two hundred and forty-two deaths were registered during the week ended November 9, 1889, including small-pox, 20; enteric fever, 4; and typhus fever, 5. The consul reports the weather cool, and that yellow fever has entirely disappeared.

ANGENTINE REPUBLIC—*Buenos Ayres.*—One thousand two hundred and fifty-nine deaths were registered during the month of September,

1889, including small-pox, 15; enteric fever, 26; scarlet fever, 1; and diphtheria, 39. The prevailing diseases were enteric and other fevers and diseases of the respiratory organs.

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Nov. 16	5,642,015	1,791	.....	.....	.....	1	20	28	50	38	.....
Paris	Nov. 16	2,260,945	917	.....	.....	1	.....	20	3	33	10	4
Glasgow	Nov. 16	545,678	232	.....	.....	.....	.....	3	2	3	.....	.....
Warsaw	Nov. 9	445,770	277	.....	.....	40	.....	.....	17	12	.....	.....
Amsterdam	Nov. 16	399,051	.....	.....	.....	.....	.....	1	... ..	4	.....	.....
Copenhagen	Nov. 9	307,000	107	.....	.....	.....	.....	4	.....	11	.....	.....
Palermo	Nov. 16	250,000	81	.....	.....	1	.....	.....	3	2	.....	.....
Belfast	Nov. 9	229,622	107	.....	.....	.....	.....	10	.....	1	.....	.....
Belfast	Nov. 16	229,622	121	.....	.....	... ...	.....	5	.....	.....	.....	.....
Genoa	Nov. 16	180,420	98	.....	.....	.....	2	.....	.. ...	1	.....	.....
Trieste	Nov. 9	154,500	60	.....	.....	.....	.....	.....	.....	4	.....	.....
Stuttgart	Nov. 16	125,510	29	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barmen	Nov. 12	109,000	32	.....	.....	.....	.....	.....	.....	.....	.....	1
Leghorn	Nov. 17	103,287	50	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayence	Nov. 9	65,802	25	.....	.....	.....	1	.....	.....	.....	.....	.....
Mayence	Nov. 2	65,802	22	.....	.....	.....	.....	.....	2	3	.....	.....
Cadiz	Nov. 9	57,157	52	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merida	Nov. 11	47,448	47	.....	.....	.....	.....	.....	.....	1	.....	.....
Merida	Nov. 18	47,448	39	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Nov. 21	23,800	24	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Nov. 22	18,824	4	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kingston, Can	Nov. 29	18,824	20	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	Aug. 19	1,250	1	... .	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 50. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., December 13, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended December 13, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.

UNITED STATES.

Scarlet fever, diphtheria, and croup.

Prevention of the spread of scarlet fever and diphtheria in the District of Columbia.—At a meeting of the Medical Society of the District of Columbia, December 11, 1889, at which the subject was the special order, it was, after full discussion, decided to recommend to Congress the passage of the following act:

AN ACT to prevent the spread of scarlet fever and diphtheria in the District of Columbia.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, from and after the passage of this act, it shall be the duty of every registered practicing physician [or other person prescribing for the sick] in the District of Columbia to make report to the health officer, on forms to be furnished by that officer, immediately such practitioner becomes aware of the existence of any case of scarlet fever or diphtheria, in his charge, and in case such person shall fail to so report within twenty-four hours he shall be subject to a penalty of not less than one nor more than twenty dollars, or in lieu thereof, shall suffer imprisonment for not less than one nor more than ten days. In case no physician shall be in charge of such patient, the householder where such case occurred, or person in charge thereof, the parent, guardian, nurse, or other person in attendance upon the sick person, shall make the report above mentioned, and in case of failure to report shall suffer the same penalties as provided for physicians in this act.

SEC. 2. It shall be the duty of the health officer co-operating with the attending physician to cause a suitable placard, flag, or warning sign, to be displayed from the front of the premises or apartment where any case of scarlet fever or diphtheria is present. It shall be unlawful for any person to remove such placard, sign, or warning flag, when so placed, without permission of the health officer, and it shall be the duty of the said health officer, in conjunction with the attending physician, to cause the premises to be properly disinfected, and to issue the necessary instructions for the isolation of the patient.

SEC. 3. No adult or minor shall visit or attend any public or private school, or place of public assemblage, or appear on the public streets,

or in the parks while affected with scarlet fever or diphtheria, and any adult person, parent or guardian of a minor, convicted of having knowingly violated the provisions of this act shall, upon conviction, forfeit and pay a sum not less than one nor more than twenty dollars, or in lieu thereof shall suffer imprisonment for not less than one nor more than ten days, and it shall be the duty of physicians, while in attendance upon cases of scarlet fever or diphtheria, to exercise such reasonable precautions to prevent the spread of the said diseases as may be prescribed by the health officer of the District of Columbia in regulations.

SEC. 4. No person, adult or minor, who has convalesced from diphtheria or scarlet fever, shall be allowed to attend any public or private school, seminary, or college until the attending physician shall have furnished a certificate that said patient has completely recovered, and that there is no danger of infection to other persons. All persons who shall, after convalescing from diphtheria or scarlet fever, visit schools, seminaries, or colleges, without providing themselves with such certificates, shall suffer the penalties provided for in section 1 of this act.

SEC. 5. The provisions of this act shall apply to every ship, vessel, steamer, boat, or craft lying or being in the rivers, harbors, or other waters within the jurisdiction of said District, and to every tent, van, shed, hovel, barn, out-house, cabin, or other like place, as if the same were an ordinary dwelling.

SEC. 6. The word "regulations," as herein used, shall be held to mean also rules, orders, circulars, and amendments. The words "person in charge thereof" shall be held to mean the owner, his agent or factor; the tenant, his clerk or representative; the nurse, or any one or more persons who by reason of their position are charged with the management or care of the premises, or interested in the person afflicted. The words "practitioner of medicine," or "practitioner," shall be held to include all persons who undertake to treat persons afflicted, either gratuitously or for pay.

SEC. 7. Any person who shall knowingly make, sign, or deliver any false report or certificate herein provided for, upon conviction thereof in the Police Court of said District, shall be fined not less than one nor more than twenty dollars, and, in default of payment thereof, be committed to jail for not less than one nor more than twenty days.

SEC. 8. The expenses necessarily incurred in the execution of the provisions of this act shall be borne from the general appropriation for the maintenance of the Health Department of the District of Columbia, and the jurisdiction of civil and criminal procedure in the enforcement of this act is hereby vested in the Police Court of the said District, with the same right of appeal as in other civil and criminal trials in said District.

Diphtheria and scarlet fever in Iowa.

The secretary of the State board of health has addressed an open letter to the press of the city of Des Moines, dated November 24, 1889, and containing such timely notes of warning that the following quotations are made:

Within the last ten days there has been a large increase in the number of cases, and they have also become more malignant in form. Unless the *utmost* vigilance is practiced by the local board of health, with the

hearty concurrence of the people generally, there will be a wide-spread epidemic. There has been a culpable laxity in the enforcement of the rules and regulations of the local board of health, and physicians in cases reported to this office have neglected to properly report to the local board cases in their practice. One of the most fruitful sources of danger is the *public funeral*. Within the last two or three days there has been a public funeral in a case of death from scarlet fever, and in two or three cases of diphtheria.

Every case of contagious disease, whether diphtheria, membranous croup, or scarlet fever, should be reported at once to the local board of health, and should be by it rigidly and faithfully quarantined without reference to the condition or circumstances of the parties. Better have a few families inconvenienced, and if need be bear their grief alone, than have, through a mistaken and misdirected sympathy, a general epidemic. What I wish to impress indelibly upon the minds of the public is the fact that diphtheria and membranous croup, which is but another name for the most fatal form of diphtheria, and scarlet fever, are diseases to be dreaded a hundred-fold more than small-pox. The last-named disease can be prevented by vaccination, but there is no known protection against the former, except by non-exposure. What is most needed is a hearty and efficient co-operation between the local board of health and the health officer; a prompt report of *all* suspected or assured cases of infectious diseases; a vigorous and impartial enforcement of the rules of quarantine, including disinfection; and an absolute prevention of public funerals, together with the arrest and severe punishment of any physician or family who shall conspire against the public welfare by efforts to secrete the disease.

Unfortunately Des Moines is not the only sufferer from the scourge of diphtheria. It is present in a large number of localities in Iowa. I have received this morning from a prominent and reliable citizen of Creston a letter in which he makes the following statements, which show a criminal negligence on the part of the local board of health, and the evil, though inevitable, results of public funerals:

* * * * * * *

Diphtheria of a malignant type is raging here, and unless there is something done to prevent public funerals, the town will become depopulated of children. Yesterday a family lost a child, and two others in the family are in a dangerous condition. *All during the day the little house was crowded, and about twenty-five carriages accompanied the remains to the cemetery.* A week or so ago a business man's child died and there was a large funeral. A brother-in-law lost a child a few days afterward, and the minister who officiated buried his own child a few days ago. The law ought to be enforced and these public funerals stopped. Our local authorities seem reluctant to take hold of the matter, probably from fear of giving pain to the afflicted, or from some other cause. If you can do anything to brace them up and stop these public funerals, I hope you will do it. * * *

Dr. Reynolds is investigating the matter at Creston.

We have received intelligence of the presence of diphtheria in the family of a physician residing in Traer, Tama County. Three of his children have died, and others are very low with the disease. The mayor appealed to the State board of health for help. Dr. Shrader has gone up there, and I find that the local health board was not properly organized until after Dr. Shrader's arrival.

The identity of membranous croup and diphtheria.

The following is extracted from the monthly bulletin of the Iowa State board of health for November, 1889:

So-called membranous croup, except where traumatic, is identical with diphtheria. Some doctors still call diphtheria membranous croup when it affects the larynx and trachea and is not visible in the throat. Terrible mischief may be done when the wrong name leads to the supposition that the disease is not contagious. Death frequently steps in to break the dangerous obstinacy of practitioners and people on this point.—*O. W. Wight, A. M., M. D., (late) Health Officer, Detroit.*

Blindness from babies' sore-eyes.

At a meeting of the Medical Society of the District of Columbia held December 4, 1889, Dr. Swan M. Burnett read a paper under the above title, in which he makes the statement that among the 50,000 totally blind persons in the United States, according to the last census, at least 30 per cent. or about 15,000 have lost their sight from *ophthalmia neonatorum*. Reports of examinations into the causation of blindness in Europe and Great Britain are unanimous in according this percentage to neglected sore-eyes of the new born. The total loss to the common wealth of this country from this cause he estimates to be not less than $7,500,000 annually. The disease is well nigh absolutely preventable if the method adopted and brought forward by Prof. Credé, of Leipsic, is carried out. This consists in dropping into the conjunctival sac of the infant as soon as it is born and washed a 2 per cent. solution of nitrate of silver. This may seem to some to be too heroic, and, ordinarily, probably is so, but if the eyes are cleansed with a milder antiseptic, or even with pure water, and watched carefully for the first appearance of the disease, many eyes will be saved which would otherwise be lost. He thinks the text books on obstetrics do not insist with sufficient force upon the prevention and early treatment of the disease, and also thinks steps should be taken to inform the public in general by means of cards, notices, etc., of the great danger of the neglect of such cases. A large number of children are delivered by midwives, and it is from among these that the majority of the cases come. At his clinic at the Central Dispensary Dr. Burnett saw in one month three infants whose eyes were totally destroyed by *ophthalmia neonatorum*.

DELAWARE BREAKWATER QUARANTINE STATION.—Acting Assistant Surgeon William P. Orr, Marine-Hospital Service, reports that the Norwegian ship "Germanic," from Cebu, Phillipine Islands, arrived at the breakwater December 2, 1889: "The captain reported the death of one man shortly after leaving Cebu. From the history of the case, as given by the captain and crew, I think he had the cholera.

At least, I regarded it as a suspicious case, and detained and disinfected the vessel. The captain said this was the only case of sickness on the vessel."

SAN FRANCISCO QUARANTINE STATION.—Authority was given, under date of the 5th instant, to Surgeon P. H. Bailhache, in command of the Marine-Hospital Service at San Francisco, Cal., to advertise for sealed proposals to build a wharf, boat-house, officers' quarters, hospital, lazaretto, etc., for the United States quarantine station at Angel Island, near San Francisco, Cal.

Reports of States, and Yearly and Monthly Reports of Cities.

COLORADO.—*Denver.*—Month of November, 1889. Population, 100,000. Total deaths, 177, including diphtheria, 16; erysipelas, 13; and enteric fever, 22.

ILLINOIS.—*Chicago.*—Month of November, 1889. Population, 1,100,000. Total deaths, 1504, including croup, 62; diarrhœa, 13; dysentery, 5; diphtheria, 125; scarlet fever, 11; enteric fever, 68; and whooping cough, 4.

IOWA.—The monthly bulletin of the State board of health for November, 1889, contains the semi-annual report of the secretary, Dr. J. F. Kennedy, which, besides other pertinent topics, contains the following regarding legislation:

A late decision of the Attorney-General, declaring that the State board of health has jurisdiction in matters relating to quarantine all over the State, greatly strengthens the hands of the board and leaves much less to be asked for in the way of additional legislation.

If like jurisdiction were granted the board in the way of abating nuisances, it would leave but little to ask for.

If the law requiring the registration of all physicians and midwives practicing within the State with the county clerk were so modified as to inflict a suitable penalty for a failure or neglect to so register, and providing further that a certificate showing a legal right to practice in the State was one of the necessary requisites for such registration, I believe the lives and health of the people of the State could be as fully protected, and a registration of vital statistics would be secured that would be as nearly perfect as could by any means be effected by legal enactments.

The board has adopted the rules and regulations promulgated by the National Railway Baggage Association to take effect January 1, 1890. A new rule has been made regarding the readmission to school of children who have had a contagious disease. A certificate must be procured from the local health board through its health officer, instead of from the attending physician, as heretofore.

IOWA—*Dubuque.*—Month of November, 1889. Population, 35,000. Total deaths, 30, including diphtheria, 2; membranous croup, 5; and dysentery, 1.

MICHIGAN.—Month of November, 1889. Reports to the State board of health, Lansing, indicate that compared with the preceding month tonsillitis, erysipelas, measles, membranous croup, and small-pox increased; and that diarrhœa, remittent fever, typho-malarial fever, typhoid fever, whooping-cough, dysentery, puerperal fever, cholera morbus, and cholera infantum decreased in prevalence.

Compared with the average for the month of November in the three years 1886–1888, inflammation of bowels, measles, and puerperal fever were more prevalent, and cerebro-spinal meningitis, cholera infantum, cholera morbus, and typho-malarial fever were less prevalent in November, 1889.

Including reports by regular observers and others, diphtheria was reported present in Michigan during the month at 69 places; scarlet fever at 71 places; typhoid fever at 83 places; measles at 18 places; and small-pox at 2 places.

Reports from all sources show diphtheria reported at 9 places more, scarlet fever at 17 places more, typhoid fever at 30 places less, measles at 3 places more, and small-pox at 2 places more in the month of November, 1889, than in the preceding month.

For the week ended November 30, 1889, reports from 58 observers indicate that erysipelas, remittent fever, typho-malarial fever, influenza, inflammation of kidney, pleuritis, pneumonia, scarlet fever, and small-pox increased, and that inflammation of brain, cerebro-spinal meningitis, membranous croup, diphtheria, typhoid fever, and whooping-cough decreased in area of prevalence.

Diphtheria was reported present during the week at 32 places; scarlet fever at 35 places; enteric fever decreased by 42 per cent., and was reported at 30 places; measles at 8 places, and small-pox at 2 places, Muskegon and Calvin township.

MINNESOTA.—Month of October, 1889. From "Public Health," the official publication of the State board of health, for November, 1889, the following is extracted:

Distribution and mortality from specified diseases in Minnesota for the month of October, 1889, *reported up to November* 20.—(Population, 1889, estimated, cities over 2,000 inhabitants, 539,000; towns and villages, 1,047,860.) Total number of deaths, 832, against 913 last month; 450 males, 382 females; 43.27 occurred in towns, 46.73 in cities over 2,000 population. Ages, under 1 year, 27.76 per cent.; 1 to 5 years, 12.02 per cent.; 5 to 15 years, 9.73 per cent.; 15 to 30 years, 13.22 per cent.; 30 to 50 years, 12.62 per cent.; 50 to 70 years, 13.82 per cent.; over 70 years, 8.41 per cent.

Measles.—Only 2 deaths from this cause reported—one in a township, the other in a city. From this and other reports it is evident that there is little of this disease in the State at the present time.

Scarlatina.—Eight deaths (1 male, 7 females), in 4 localities, 4 counties; 62.50 per cent. occurred in cities. Ages, 6 under 5 years, 2 between 5 and 10 years. Mortality and distribution less than last month, but the same as the corresponding month last year. This disease has probably reached its minimum, coming down from its wide-spread distribution during the late spring and early summer. Very little of it is reported from other sources.

Diphtheria.—Eighty-three deaths (49 males, 34 females), in 24 localities, 23 counties; 53.01 occurred in cities of over 2,000 inhabitants. Ages, under 5 years, 50 per cent.; between 5 and 15 years, 50 per cent. A decided increase in mortality and distribution compared with last month, but less than for the same month last year. As happened in 1887 and 1888, this disease begins its ascent during the fall and reaches its climax in the early winter. This climax occurred in December of 1887 and January of 1888. Reports from other sources show this disease to be on the increase.

Croup.—Twenty-five deaths (14 males, 11 females), in 10 localities, 10 counties; 76 per cent. occurred in cities of over 2,000 inhabitants. Ages, under 5 years, 76 per cent.; between 5 and 15 years, 24 per cent. Corresponding with diphtheria this disease has made a decided increase since last month, when there were only 9 deaths reported from this cause, but the mortality is less than for same month last year.

Typhoid fever.—Sixty-two deaths (43 males, 19 females), in 30 localities, 27 counties; 63 per cent. occurred in cities. Ages, between 5 and 15 years, 9 per cent.; 15 to 30 years, 47 per cent.; 30 to 50 years, 30 per cent.; 50 to 60 years, 8 per cent. A slight increase compared with last month, but less than one-half compared with same month last year. During this month of 1887 and 1888, this disease reached its climax, and as the number of deaths in the same month of 1889 is much less than for either of the other years, it is evident that the mortality has not been as great.

Diarrhœal diseases of children.—Sixty-three deaths (27 males, 36 females), in 29 localities, 23 counties; 52 per cent. occurred in cities. Ages, under 1 year, 86 per cent.; between 1 and 3 years, 14 per cent. Less than half the mortality compared with last month, and not as great as for the corresponding month of 1888.

Bronchitis.—Twelve deaths (7 males, 5 females), in 6 localities, 6 counties; 66 per cent. occurred in cities. Ages, under 5 years, 75 per cent.; between 50 and 70 years, 25 per cent. A slight decrease in mortality compared with last month.

Pneumonia.—Twenty-nine deaths (16 males, 13 females) in 14 localities, 14 counties; 65 per cent. occurred in cities. Ages, under 1 year, 34 per cent.; between 50 and 70 years, 34 per cent. An increase compared with last month, but much less than for same month last year.

MISSOURI—*St. Louis.*—Month of November, 1889. Population, 450,000. Total deaths, 593, including scarlet fever, 15; diphtheria, 29; croup, 4; whooping-cough, 2; and enteric fever, 13.

NEW YORK.—Month of October, 1889. Reports to the State board of health, Albany, from eight districts, including New York, Brooklyn, and 126 other cities and towns, show a total of 8,050 deaths, including enteric fever, 261; scarlet fever, 57; measles, 7; erysipelas, 13; whoop-

ing-cough, 70; croup and diphtheria, 570; and diarrhœal diseases, 339.

The Monthly Bulletin of Health, of New York, says:

Remarks.—Of the 8,050 deaths in this month, 6,546 occurred in the cities and towns specified, the population of which is 4,015,000, giving an annual death rate for them per 1,000 of 19.20. The remaining 1,504 deaths are reported from about 500 rural towns. Of the former (urban) class, 31.67 per cent., and of the latter (rural) class, 14.33 per cent. of the deaths occurred under the age of five years; 18.56 per cent. of the former and 14 per cent. of the latter class were from zymotic diseases. The mortality from diphtheria has increased earlier than last year, but is yet much lower than in the winter months; numerous epidemics have occurred, and the number of localities is much increased; 7.89 per cent. of the *urban* mortality and 3.52 per cent. of the *rural* were from this cause. Typhoid fever varies little; it caused 2.80 per cent. of the *urban* and 5.18 per cent. of the strictly *rural* mortality. Consumption caused 126.20 per 1,000 of the deaths; 176.32 per 1,000 above the age of five years.

Brooklyn.—Month ending November 30, 1889. Population, 843,602. Total deaths, 1,273, including 225 from zymotic diseases. The chief causes of death were phthisis, 167; pneumonia, 158; diphtheria, 97; and bronchitis, 63.

Rochester.—Month of November, 1889. Population, 130,000. Total deaths, 140, including diphtheria, 1; and enteric fever, 3.

NORTH CAROLINA.—The bulletin of the North Carolina board of health for November, 1889, states that the board will do all in its power to aid the officers of the law and the State medical society in carrying out the provisions of the act regulating the practice of medicine, which it is the intention to have strictly enforced after January 1, 1890. Copies of the law will be furnished upon application to the board. The review of diseases reported for October, 1889, shows that diphtheria prevailed in 17 counties, and typhoid fever in 37. Of the 93 counties of the State enumerated in the report, 20 are recorded as having no board of health, and from 7 others no report was received.

OHIO.—*Cincinnati.*—Month of November, 1889. Population, 325,000. Total deaths, 462, including diarrhœa, 8; dysentery, 4; diphtheria, 39; measles, 1; scarlet fever, 4; enteric fever, 12; and whooping-cough, 4.

Dayton.—Month of November, 1889. Population, 60,000. Total deaths, 65, including diphtheritic and membranous croup, 7; and diphtheria, 5.

PENNSYLVANIA.—*Williamsport.*—Month of November, 1889. Population, 35,271. Total deaths, 27, including enteric fever, 1.

RHODE ISLAND.—*Newport.*—Month of November, 1889. Population, 22,000. Total deaths, 24, including none from contagious diseases. Two cases of enteric fever were reported during the month.

TEXAS.—*San Antonio.*—Month of November, 1889. Population, 50,000. Total deaths, 16, including enteric fever, 2.

Brownsville—Small-pox.—Acting Assistant Surgeon J. M. Main, United States Marine-Hospital Service, reports as follows, under date of December 4, 1889:

Variola has made its appearance here, five cases appearing simultaneously; form very mild. These cases are all carefully quarantined, and no sanitary regulation neglected. Compulsory vaccination will be enforced as soon as virus can be obtained.

VIRGINIA.—*Lynchburg.*—Month of November, 1889. Population, 25,000. Total deaths, 28, none from contagious diseases.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Dec. 7	1,591,935	661	.....	.....	.....	.....	.....	.....	7	6	19	5	11
Chicago, Ill.	Oct. 5	1,100,000	356	.....	.....	.....	.....	.....	.....	9	1	26	.....	2
Chicago, Ill.	Oct. 12	1,100,000	334	.....	.....	.....	.....	.....	.....	10	3	24	.....	1
Chicago, Ill.	Oct. 19	1,100,000	309	.....	.....	.....	.....	.....	.....	14	3	28	1	1
Chicago, Ill.	Oct. 26	1,100,000	300	.....	.....	.....	.....	.....	.....	21	3	24	.....	2
Chicago, Ill.	Nov. 2	1,100,000	284	.....	.....	.....	.....	.....	.....	14	3	30	.....	1
Chicago, Ill.	Nov. 9	1,100,000	340	.....	.....	.....	.....	.....	.....	24	.....	27	.....	.....
Chicago, Ill.	Nov. 16	1,100,000	286	.....	.....	.....	.....	.....	.....	16	4	22	.....	.....
Chicago, Ill.	Nov. 23	1,100,000	.....	.....	.....	.....	.....	.....	.....	10	1	26	.....	1
Chicago, Ill.	Nov. 30	1,100,000	256	.....	.....	.....	.....	.....	.....	4	3	20	.....	2
Chicago, Ill.	Dec. 7	1,100,000	325	.....	.....	.....	.....	.....	.....	8	4	30	1	2
Philadelphia, Pa.	Dec. 7	1,040,245	352	.....	.....	.....	.....	.....	.....	14	5	20	2	2
Brooklyn, N. Y.	Dec. 7	843,602	310	.....	.....	.....	.....	.....	.....	3	4	28	1	4
Baltimore, Md.	Dec. 7	500,343	182	.....	.....	.....	.....	.....	.....	7	1	4	.....	3
St. Louis, Mo.	Nov. 30	450,000	118	.....	.....	.....	.....	.....	.....	3	4	3	.....	.....
St. Louis, Mo.	Dec. 7	450,000	130	.....	.....	.....	.....	.....	.....	8	4	8	.....	.....
Cincinnati, Ohio.	Dec. 7	325,000	110	.....	.....	.....	.....	.....	.....	1	.....	6	2	1
San Francisco, Cal.	Dec. 1	300,000	117	.....	.....	.....	.....	.....	.....	3	.....	1	.....	.....
New Orleans, La.	Nov. 30	254,000	121	.....	.....	.....	.....	.....	.....	3	.....	2	.....	.....
Detroit, Mich.	Nov. 30	250,000	73	.....	.....	.....	.....	.....	.....	2	1	7	1	.....
Pittsburgh, Pa.	Dec. 7	230,000	66	.....	.....	.....	.....	.....	.....	2	2	6	.....	.....
Louisville, Ky.	Nov. 30	227,000	50	.....	.....	.....	.....	.....	.....	2	1	1	.....	.....
Kansas City, Mo.	Dec. 7	180,000	20	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Denver, Colo.	Nov. 29	135,000	43	.....	.....	.....	.....	.....	.....	3	.....	2	.....	.....
Denver, Colo.	Dec. 6	135,000	33	.....	.....	.....	.....	.....	.....	4	1	1	.....	.....
Providence, R. I.	Dec. 7	127,000	55	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....
Indianapolis, Ind.	Dec. 6	124,450	25	.....	.....	.....	.....	.....	.....	1	.....	5	.....	.....
Richmond, Va.	Dec. 2	100,000	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond, Va.	Dec. 9	100,000	30	.....	.....	.....	.....	.....	.....	2	.....	2	.....	.....
Toledo, Ohio.	Dec. 6	89,000	23	.....	.....	.....	.....	.....	.....	1	.....	5	.....	.....
Fall River, Mass.	Dec. 7	69,000	30	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Nashville, Tenn.	Dec. 7	68,531	25	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Charleston, S. C.	Dec. 7	60,145	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lynn, Mass.	Dec. 7	53,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Dec. 7	42,000	10	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Portland, Me.	Dec. 7	42,000	16	.....	.....	.....	.....	.....	.....	1	.....	1	.....	.....
Galveston, Tex.	Nov. 22	40,000	16	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
San Diego, Cal.	Nov. 27	32,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yonkers, N. Y.	Dec. 6	31,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Altoona, Pa.	Nov. 30	30,000	3	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Altoona, Pa.	Dec. 7	30,000	4	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Binghamton, N. Y.	Dec. 7	30,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Canton, Ohio.	Nov. 29	30,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y.	Dec. 7	26,000	15	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Newport, R. I.	Dec. 5	22,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Dec. 7	21,553	7	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Rock Island, Ill.	Dec. 1	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Dec. 8	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Pensacola, Fla.	Dec. 7	15,000	6	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended November 23 corresponded to an annual rate of 18.2 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Brighton, viz, 8.6, and the highest in Plymouth, viz, 30.7 a thousand. Diphtheria caused 5 deaths in Salford, 2 in Manchester, 2 in Plymouth, 2 in Halifax, 2 in Sheffield, and 2 in New Castle-upon-Tyne.

London.—One thousand three hundred and seventy-six deaths were registered during the week, including measles, 33; scarlet fever, 17; diphtheria, 30; whooping-cough, 31; enteric fever, 22; and diarrhœa and dysentery, 17. The deaths from all causes corresponded to an annual rate of 16.5 a thousand. Diseases of the respiratory organs caused 328 deaths. In greater London 1,737 deaths were registered, corresponding to an annual rate of 16.1 a thousand of the population. In the "outer ring" the deaths included measles, 4; scarlet fever, 8; diphtheria, 5; and whooping-cough, 8.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended November 23, in the 16 principal town districts of Ireland, was 24.2 a thousand of the population. The lowest rate was recorded in Kilkenny, viz, 4.2, and the highest in Lurgan, viz, 41.0 a thousand. In Dublin and suburbs 164 deaths were registered, including enteric fever, 6; whooping-cough, 2; and diarrhœa, 1.

During the quarter ended September 30, 1889, there were 17,929 deaths registered, corresponding to an annual rate of 15.2 a thousand of the estimated population. The deaths included measles, 81; scarlet fever, 96; typhus, 104; whooping-cough, 348; diphtheria, 85; simple, continued, and ill-defined fevers, 61; enteric fever, 202; diarrhœa, 708; and simple cholera, 20.

Scotland.—The deaths registered in eight principal towns during the week ended November 23, 1889, corresponded to an annual rate of 20.6 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Dundee, viz, 14.6, and the highest in Glasgow, viz, 23.9 a thousand. The aggregate number of deaths registered from all causes was 527, including measles, 7; scarlet fever, 8; diphtheria, 8; whooping-cough, 7; fever, 8; and diarrhœa, 15.

CUBA—*Havana.*—Five deaths from yellow fever were registered during the week ended November 28, 1889.

The United States sanitary inspector reports, under date of December 4, that there were 471 deaths during the month of November, including yellow fever, 28; enteric fever, 7; bilious fever, 1; so-called pernicious fever, 9; intermittent and remittent fever, 2; diphtheria and croup, 6; and glanders, 2. Six of the deaths from yellow fever were among persons in the army and navy, in the military hospital, while the remaining 22 occurred among private persons in different parts of the city. Changeable weather and northerly winds are prevailing, and cases of invasion by yellow fever have very much diminished.

No foreign reports have been received from the Department of State this week up to the time of going to press.

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 51. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., December 20, 1889.

***Abstract of Domestic and Foreign Sanitary Reports received during the week ended December* 20, 1889, *published in accordance with section* 4, *Act of Congress, approved April* 29, 1878.**

UNITED STATES.

Steam disinfecting-chambers.

The following are the specifications for the steam disinfecting-chambers about to be constructed for the United States Quarantine Station, Angel Island, San Francisco Bay. The drawings, to which the specifications refer, may be seen in the Annual Report of the Marine-Hospital Service, 1889. These plans have been developed from the ideas first promulgated by Dr. Joseph Holt, formerly president of the State board of health of Louisiana, and from the improvements made by Dr. C. P. Wilkinson, the present president of the same board. The principle involved, however, has recently been published in a description of Washington Lyon's steam-disinfector, on page 420 of "Hygiene and Public Health," by Louis C. Parkes, M. D., of London:

There will be three disinfecting-chambers, consisting of jacketed cylindrical shells, 7 feet interior diameter, 40 feet long, with doors at each end.

The construction of these chambers is fully shown on miscellaneous drawing No. 224. The inside and outside shell of jacket to be constructed of $\frac{1}{4}$-inch thick C. H. No. 1 boiler-iron, of an ultimate tensile strength of 50,000 pounds to the square inch of section, and showing a reduction of area at fracture of 50 per cent. when tested in specimens of the shapes and sections required by the regulations of the United States Board of Supervising Inspectors of Steam-Vessels.

The sheets of the shells to be as large as possible and as indicated on the drawing, each section of the shells preferably to consist of two sheets only. The seams to be riveted with $\frac{3}{4}$-inch diameter rivets, spaced $1\frac{7}{8}$ inch from centers, and driven without the use of a button set. All horizontal seams to be double-riveted staggered. Holes may be drilled or punched, but in no case must a drift-pin be used to bring holes fair.

All seams to be split and calked inside, and chipped and calked outside of shells, calking to be done with a blunt tool square driven.

The inner and outer shell at each end of chambers to be properly riveted to solid faced and turned wrought-iron rings, as shown. The latter to be grooved to receive head of doors. The shells are also to be held apart and stayed by ¾-inch diameter stay-bolts, riveted as indicated by the drawings.

The doors to be constructed of same thickness of metal as shells of chamber, and riveted to solid turned and faced wrought-iron rings, provided with proper head, as indicated.

Each door is also braced by a number of radial and circular braces of 2½ by ½-inch iron properly riveted on, as shown by the drawing.

Heavy cast-iron hinges to be constructed in accordance with the drawing and properly riveted on.

In opening and closing the doors of the chambers the weight of the former is partly carried by rollers, constructed as shown, and moving on a quadrant iron track, 2 by ⅜ inches, secured firmly to floors in the required positions.

Each door to be closed by twelve 1-inch diameter screws, with handle secured in sleeve-nuts with proper fork-plates. Each bolt and nut with fork-plates to be swinging, and secured with 1-inch diameter bolt to hinge-plate, 4 feet long, 3 inches wide, and ⅜ inch thick, securely riveted to outer shell of chamber. The entire construction of closing the doors to be as shown by the details on the drawing.

The ground-bars for bolts, tightening doors, to be forged to ends of door-braces in a first-class manner. The joints of doors and chambers to be made perfectly steam-tight, with ⅛-inch thick "Jenkins Bros." patent packing secured to face of grooved wrought-iron rings of chambers in a proper manner. The packing to cover entire exposed face of each ring.

The hexagonal framing inside of chambers to be of fir or spruce, 3 by 8 inches, spaced as shown, cut segmental to fit inner lining of chambers, mortised and tenoned one into the other. The slats on segments to be fir or spruce, 1 inch thick, 2½ inches wide, except on lower segment, where they will be 1½ inches thick, 3 inches wide, all secured to segments with composition nails, the ends of slats to butt on the center of segments; the slats on upper segments to be furnished with tinned hooks, as may be directed by the superintendent.

The disinfecting-chambers to rest upon cast-iron saddles, six to each chamber, of design and dimensions shown.

Each chamber is also to be provided with a high-grade thermometer, arranged in nickel-plated brass open casing for protection.

The thermometers must be so attached as to indicate the temperature existing in each chamber.

The steam supply and return pipes to be of the sizes noted, and so arranged with steam-gauges, valves, safety-valves, and pressure-regulators, as shown on the drawing, so that steam from the boiler can be supplied to the jackets of chambers or the chambers themselves, as desired. The pipe-connections with the chambers must be made in a first-class and workman-like manner.

Reports of States, and Yearly and Monthly Reports of Cities.

ALABAMA—*Mobile.*—Month of November, 1889. Population, 40,000. Total deaths, 72; including enteric fever, 1.

CALIFORNIA.—Reports to the State board of health, Sacramento, for the month of November, 1889, from 104 localities, with an estimated

population of 884,400, give the number of deaths as 992, which is a percentage of 1.17+ per thousand in the month, or an annual mortality at the rate of 14.04+, which is a remarkably small death-rate, and indicates a most favorable condition of the public health. Consumption is credited with causing 156 deaths, or little less than one-sixth of the total mortality of the State for the month. The deaths included whooping-cough, 4; diphtheria and croup, 49; scarlet fever, 4; and enteric fever, 40. During the earlier part of the month disorders of the bowels seemed generally to prevail, but after the excessive rain-fall in the latter part of November, diarrhœal disorders were not noticed so frequently as diseases of the respiratory system, which prevailed in quite a number of localities. Diarrhœa and dysentery were reported from 23 places; small-pox in 1 place; measles in 4 places; scarlet fever in 8 places; whooping-cough in 4 places; enteric fever in 29 places; and diphtheria and croup in 25 places. In Gold Run, Placer County, there has been quite an epidemic of diphtheria, which Dr. Miner attributes to the bad sanitary condition of the town and the neglect of sanitary precautions in isolating those attacked.

Oakland.—Month of November, 1889. Total deaths, 59; including diphtheria, 2; enteric fever, 3; and scarlet fever, 2.

Sacramento.—Month of November, 1889. Population, 35,000. Total deaths, 29; including croup, 1; diphtheria, 1; and enteric fever, 3.

GEORGIA—*Savannah.*—Month of November, 1889. Population, 57,000. Total deaths, 76; including croup, 2; diphtheria, 1; and enteric fever, 1.

ILLINOIS—*Galesburg.*—Month of November, 1889. Population, 17,000. Total deaths, 26; including diphtheritic croup, 9.

Peoria.—Month of November, 1889. Population, 40,000. Total deaths, 46; including enteric fever, 1.

IOWA—*Keokuk.*—Month of November, 1889. Population, 16,000. Total deaths, 20; including croup, 1; and diphtheria, 4.

KENTUCKY—*Louisville.*—Month of November, 1889. Population, 227,000. Total deaths, 190; including croup, 3; diphtheria, 10; scarlet fever, 4; and enteric fever, 11.

MASSACHUSETTS—*Worcester.*—Month of November, 1889. Population, 82,000. Total deaths, 114; including croup, 1; diphtheria, 8; and enteric fever, 1.

MICHIGAN.—Week ended December 7, 1889. Reports to the State board of health, Lansing, from 52 observers, indicate that inflammation of brain, cerebro-spinal meningitis, cholera morbus, consumption of lungs, diphtheria, intermittent fever, inflammation of kidney, measles, and whooping-cough increased, and dysentery, remittent fever, typho-

malarial fever, pleuritis, and puerperal fever decreased in area of prevalence.

Diphtheria was reported present during the week at 25 places; scarlet fever at 34 places; enteric fever at 30 places; measles at 10 places; and small-pox at 2 places.

Detroit.—Month of November, 1889. Population, 250,000. Total deaths, 292; including croup, 17; diphtheria, 33; enteric fever, 8; measles, 2; and scarlet fever, 3.

Grand Rapids.—Month of November, 1889. Population, 75,000. Total deaths, 82; including diphtheria, 14; enteric fever, 7; and measles, 1.

MINNESOTA—*Minneapolis.*—Month of November, 1889. Population, 200,000. Total deaths, 183; including enteric fever, 11; diphtheria, 26; scarlet fever, 3; and whooping-cough, 2.

TENNESSEE—*Nashville.*—Month of September, 1889. Population, 65,153. Total deaths, 82; including croup, 1; diphtheria, 1; enteric fever, 2; and whooping-cough, 1.

Month of November, 1889. Total deaths, 82; including croup, 2; diphtheria, 1; enteric fever, 4; and whooping-cough, 1.

MORTALITY TABLE, CITIES OF THE UNITED STATES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Dec. 14	1,592,853	640	.....	.....	.....	.....	.....	.....	7	5	28	3	5
Philadelphia, Pa.	Dec. 14	1,040,245	366	.....	.....	.....	.....	.....	.....	11	8	17	5	1
Brooklyn, N. Y.	Dec. 14	843,602	328	.....	.....	.....	.....	.....	.....	6	2	35	.....	2
Baltimore, Md.	Dec. 14	500,343	158	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	4
Boston, Mass.	Dec. 14	420,000	153	.....	.....	.....	.....	.....	.....	.....	1	7	.....	.....
San Francisco, Cal.	Dec. 6	330,000	131	.....	.....	.....	.....	.....	.....	8	.....	5	.....	.....
Cincinnati, Ohio	Dec. 14	325,000	110	.....	.....	.....	.....	.....	.....	1	.....	6	.....	.....
Washington, D. C.	Dec. 7	250,000	101	.....	.....	.....	.....	.....	.....	11	.....	4	.....	.....
Washington, D. C.	Dec. 14	250,000	96	.....	.....	.....	.....	.....	.....	4	.....	2	1	1
Detroit, Mich.	Dec. 7	250,000	46	.....	.....	.....	.....	.....	.....	.....	1	3	.....	.....
Pittsburgh, Pa.	Dec. 14	230,000	94	.....	.....	.....	.....	.....	.....	9	2	7	.....	.....
Minneapolis, Minn.	Dec. 7	200,000	37	.....	.....	.....	.....	.....	.....	2	.....	1	.....	.....
Minneapolis, Minn.	Dec. 14	200,000	40	.....	.....	.....	.....	.....	.....	3	1	9	.....	.....
Rochester, N. Y.	Dec. 7	130,000	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rochester, N. Y.	Dec. 14	130,000	42	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....
Indianapolis, Ind.	Dec. 13	124,450	24	.....	.....	.....	.....	.....	.....	1	1	1	.....	.....
Toledo, Ohio	Dec. 13	89,000	19	.....	.....	.....	.....	.....	.....	.....	.....	3	.....	.....
Fall River, Mass.	Dec. 14	69,000	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn.	Dec. 14	68,531	13	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1
Charleston, S. C.	Dec. 14	60,145	36	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Lynn, Mass.	Dec. 14	53,000	10	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Portland, Me.	Dec. 14	42,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
San Diego, Cal.	Dec. 4	32,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Diego, Cal.	Dec. 11	32,000	4	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Yonkers, N. Y.	Dec. 13	31,000	10	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Binghamton, N. Y.	Dec. 14	30,000	8	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Newport, R. I.	Dec. 12	22,000	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Dec. 14	21,553	3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Keokuk, Iowa	Dec. 7	16,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Keokuk, Iowa	Dec. 14	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended November 30 corresponded to an annual rate of 19.0 a thousand of the aggregate population, which is estimated at 9,555.406. The lowest rate was recorded in Norwich, viz, 11.6, and the highest in Plymouth, viz, 32.0 a thousand. Diphtheria caused 6 deaths in Salford, 2 in Liverpool, 3 in Plymouth, and 2 in New Castle-upon-Tyne.

London.—One thousand four hundred and forty-eight deaths were registered during the week, including measles, 18; scarlet fever, 19; diphtheria, 33; whooping-cough, 44; enteric fever, 15; and diarrhœa and dysentery, 12. The deaths from all causes corresponded to an annual rate of 17.4 a thousand. Diseases of the respiratory organs caused 345 deaths. In greater London 1,876 deaths were registered, corresponding to an annual rate of 17.3 a thousand of the population. In the "outer ring" the deaths included measles, 6; scarlet fever, 7; diphtheria, 9; and whooping-cough, 6.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended November 30, in the 16 principal town districts of Ireland, was 26.6 a thousand of the population. The lowest rate was recorded in Newry, viz, 10.5, and the highest in Kilkenny, viz, 50.7 a thousand. In Dublin and suburbs 194 deaths were registered, including diphtheria, 1; measles, 4; enteric fever, 9; whooping-cough, 5; and diarrhœa, 5.

Scotland.—The deaths registered in eight principal towns during the week ended November 30 corresponded to an annual rate of 20.6 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Dundee, viz, 15.0, and the highest in Aberdeen, viz, 23.1 a thousand. The aggregate number of deaths registered from all causes was 536, including small-pox, 1; measles, 18; scarlet fever, 13; diphtheria, 9; whooping-cough, 21; fever, 8; and diarrhœa, 11.

Malta and Gozo.—One hundred and four deaths were registered during the last half of October, 1889, including diphtheria 2 and dysentery, 1.

BRAZIL—*Rio de Janeiro.*—Two hundred and fourteen deaths were registered during the week ended November 16, 1889, including yellow fever, 4; small-pox 25; enteric fever, 3; typhus fever, 5; and scarlet ever, 1.

Maceio.—Sixty-one deaths were registered during the month of October, 1889, none of which were from contagious diseases.

Ceara.—One hundred and twenty-three deaths were registered during the month of September, 1889, including 1 from yellow fever; and 113 during the month of October, none of which were from contagious diseases. Population, 35,000.

MEXICO—*Guaymas.*—Fourteen deaths were registered during the month of November, 1889. No particular diseases prevailed. Sanitary condition good. Population, 6,600.

BRITISH WEST INDIES—*Trinidad.*—Three hundred and sixty deaths were registered during the period from August 10 to October 26, inclusive, in the city of Port of Spain, having a population of 40,000. No contagious diseases were reported.

CUBA—*Havana.*—Five deaths from yellow fever were reported during the week ended December 5, 1889.

Cardenas.—December 5, 1889. Weather dry and cool. Good health in town and harbor. Population, 24,500.

DEMERARA—*Georgetown.*—November 13, 1889. No contagious diseases. Consumption, malarial fevers, and diseases of the bowels and kidneys prevail.

UNITED STATES OF COLOMBIA—*Colon.*—November 30, 1889. Health of the city remarkably good.

BAHAMAS—*Nassau, N. P.*—November 30, 1889. Population, 12,000. Number of deaths never reported. City healthy. Weather very rainy.

Influenza.

(Cable reports from *Der Deutscher Correspondent*, Baltimore, Md., translated for this Bureau.)

Berlin, December 14.—Professor Leyden, who last evening made an address in the "Clinical Institute," attributed the influenza epidemic to the same causes that produce the dengue fever, which makes its appearance particularly in the East. The medical periodicals state that the epidemic keeps spreading.

Professor Virchow has recovered from his attack of influenza; several members of the Imperial family have also been attacked by the same. The *National Zeitung* is censuring those who spread pessimistic theories about the epidemic. This paper shows that the sanitary condition of Berlin is excellent, and that its mortality is smaller than any other capital city of Europe, with the exception of London. Official data of the number of cases of influenza here have not been made. It is known, however, that but few families have escaped the plague, and that a third of the population has been ill with it. The medical press refutes the theory that there is any connection between the influenza plague and cholera, although it is known to be a fact that cholera has repeatedly appeared after an influenza epidemic.

Berlin, December 15.—The number of cases of influenza is rated at 15,000. In many courts the administration of justice is suspended on account of the judges being ill with influenza. It has been proposed to close the schools in Danzig, half of the school children being ill with it.

Antwerp, December 13.—The influenza epidemic has made its appearance here, and many soldiers of the garrison are ill with it.

Paris, December 11.—The epidemic of grippe keeps spreading. The disease has broken out in the barracks, the markets, and at the "École Centrale." A medical report on the raging epidemic shows that among the employés of the large dry-goods emporium, "Magasin du Lanure," 670 have fallen sick. The disease generally lasts four days, and complications only arise in rare cases. In other large stores the disease is raging in the same degree. Special preventive measures are considered unnecessary.

Rome, December 13.—The influenza epidemic has broken out here in a mild form. Doctor Canabis, director of the board of health, has gone to St. Petersburg to study the disease there, and, if possible, to confirm what caused it to assume later a malignant character. This is done to avoid a similar result here.

Epidemic of dengue in Asiatic Turkey.

(From the *Revue Medico-Pharmaceutique*, Constantinople, November 30, 1889. Extracts translated for this Bureau.)

Having first ravaged Smyrna, dengue appeared at Magnesia, Asia Minor, two and one-half hours by rail from Smyrna, at the beginning of August, 1889, and prevailed in the form of a severe epidemic. Three-quarters of the population, which numbers 40,000, were afflicted. About the middle of August it appeared in Salonica, where it was sporadic and benign. It reached Dardanelles in the latter part of September. The Jewish quarter of this city was the first attacked. There were but few cases in the Greek and Armenian quarters. At Bourgas there occurred the case of a woman who had had the disease at Smyrna, passed the period of convalescence at Constantinople, and ten days later arrived at Bourgas, where she was attacked with fever, curvature, characteristic articular pains, and, finally, with the secondary red eruption.

Observations on dengue fever.

The epidemic at present existing in the East is best known under its scientific name of "dengue fever." Although its microbe has not been discovered, dengue fever is doubtless a disease to be classed among acute infectious maladies; moreover, on account of resemblance, it should take rank with acute articulary rheumatism, the morbus maculosus of Werlhofii, the purpura and the peliosis rheumatica. It may be classed as such by the same right by which Hueter described acute articular rheumatism as an infectious malady, although its microbe has not been discovered, because nothing better explains the propagation, symptoms, and progressive development of the disease than the hypothesis of a specific organized poison.

Zaeros Pascha, director of the bacteriological laboratory of Constantinople, has begun a series of researches with a view to the discovery of the microbe of dengue. He states that up to the present

time he has not found it, and that the only point worthy of notice is that the blood of persons attacked by dengue does not contain the microbe. But these negative examinations and cultures are not sufficient reason for denying its existence or even its presence in the blood, for we know absolutely nothing of this microbe, its manner of propagation and discovery. It is true that Cunningham and Charles found in the blood enormous masses of round corpuscles which, by the means of hyperosmic acid, turn an intense carmine red, and they declare this matter to be the microbe sought, but so far their results have not been verified by culture or inoculation.

For the rest, this microbe must, *a priori*, be found in the blood. The disease, the symptoms, and reactions are too general to allow of a doubt that the microbe circulates in the body by means of the blood.

As to the contagiousness of dengue fever, the writer has never observed or read a striking proof that this disease is propagated from person to person, as is the case with variola or exanthematic typhus, while there are reasons for believing that its method of propagation is identical with that of Asiatic cholera and abdominal typhus.

Dengue is not contagious; it is not miasmatic, like malaria, but a miasmatico-contagious disease, like Asiatic cholera, abdominal typhus, and epidemic cerebro-spinal meningitis.

The poison is prepared in infected soil, and received by means of water and emanations.

A rocky soil, according to the theory of Pettenkofer, is highly unfavorable to the development of dengue.

Dengue has been believed to be contagious from the fact that several persons in a household are apt to be attacked by it. There are instances to the contrary.

Dengue attacks both sexes and every age without the least predilection. Very few persons are immune. The epidemic may become pandemic and attack even domestic animals.

Reported epidemic of dingha in Jerusalem.

The *Jewish World*, London, November 29, 1889, reports an epidemic of "dingha," presumably dengue, to be prevailing in Jerusalem.

Leprosy in Turkey—Island of Samos.

(Briefed translation for this Bureau from the *Revue Medico-Pharmaceutique*, Constantinople, Turkey, November 30, 1889.)

The population of the Island of Samos is about 42,000 souls.

According to the official report of this little principality, printed in 1886, there are but 22 men and 21 women lepers, but many cases have been discovered which are not on the official list. Only the lepers in whom the disease has reached an advanced stage are isolated.

The Samian physicians and people attribute leprosy to uncleanliness, the excessive use of inferior olive oil, and of a sort of red caviar, known as tarama, a mixture of eggs in a state of putrefaction, very salty and offensive.

Marriage among lepers, or between a leprous and non-leprous person, is not prohibited. But if the non-leprous person asks for divorce the law accords it.

The Samians consider leprosy as contagious; still, the leper may go about freely and exercise the calling of muleteer or porter in the sight and knowledge of all men, until some day he is brutally expelled to the mountains and abandoned to his fate, unless received into a monastery where the monks accommodate the lepers in huts a little removed from the convent. The prince of Samos has lately constructed a refuge in which he proposes to collect and isolate the lepers of the island.

The archimandrite of a monastery in which there are fifteen lepers states the results of his observation of leprosy since 1839. He has observed a great many lepers at his convent. He does not believe leprosy to be contagious, basing his belief on the fact that he has never seen the disease transmitted to parents or by marriage. He also relates the history of a man attacked by a deep ecthyma, which made him repulsive, and for which he was expelled from the community. This unfortunate man took refuge among the lepers, and lived among them twenty years. His body, covered with suppurating surfaces, exposed him to the easy transmission of the disease. He never, however, contracted leprosy. He cites the cases of many mixed marriages, lasting as much as twenty years, in which there was no transmission of the disease. Finally, he cites himself as an example. For forty years he has lived in daily communication with lepers without contracting the disease.

With regard to hereditary leprosy, he is convinced of it by many facts. He cites cases of hereditary leprosy transmitted by grand-parents to descendants whom they have never seen, and who have, in some cases, been born after their death.

The superior of the same monastery has studied leprosy in the cases of two hundred lepers, who have died in the convent since 1835. His ideas differ little from those of the archimandrite. He has never seen leprosy transmitted from husband to wife. He has seen leprosy spontaneously arrested in the case of one leper, who lived many years after having lost successively his fingers, toes, hands, and feet.

In another convent at Samos the result of careful observation of leprosy is that it is not contagious.

Doctor Panos, of Samos, has observed many facts opposed to the contagion of leprosy. He says, however, "the discovery of the bacillus embarrasses me," from which remark it may be seen that practitioners who are opposed to the theory of contagion can not resist the influence of the seductive theories of the day.

Mr. Zambounis, for many years secretary-general of the principality, and who has, consequently, been in a position to be aware of all that passes on the island, states that he has known many marriages in which one of the couple was a leper. He has never known the other to become contaminated by the disease. He cites one case of which the following is a brief account:

A few years ago the people of a certain village demanded the expulsion of a woman, become a leper, who belonged to one of the best families of the place. The prince, Aristarchi, was opposed to it, and had a detailed medical report on her case drawn up and sent simultaneously to Paris and Vienna. Casenave, Devergie, and Gibert, of Paris, and Hebra and Sigmund, of Vienna, expressed themselves in opposition to the contagiousness of the disease, and advised that the woman should not be expelled. On these reports the unhappy woman was left unmolested. The leper lived fifteen years in her family, with her rela-

tions and friends, none of whom contracted the disease. They lived in free intercourse with her and took no precautions against contagion.

A young lady of good family became attached to a man in whom leprosy was beginning. She married him in spite of opposition, and lived with him for eight years. She did not wish to survive him and took no means to avoid the disease. She was even inoculated with it several times by her husband, who wished to communicate it to her, all without result. The husband died a leper, while the woman still lives, strong and well.

In some villages lepers continue to live in their own homes for a length of time. They draw water at the wells with their bleeding, ulcerated hands. After them the women and children of the village draw water at the same well, making use of the same well ropes. There has never been an example of inoculation or transmission.

In spite of the opinion of doctors, authorities, and of each Samian in particular, especially of such Samians as have been intimately thrown with leprous relatives and friends, the people are so afraid of leprosy that they oppose the erection of the lazaretto at less than six hours travel from Vathy, the capital of the island.

The present prince of Samos, Catheodori Pacha, a man of superior mind and education, consulted the writer of this article as to the means of extirpating leprosy in his principality, and of ameliorating the condition of its victims. The following is his reply:

1. A lazaretto should be erected at a distance from dwellings, conformed to the laws of hygiene, and removed from the regions where the malady is endemic, for close observation has shown that there are localities which are immune from this plague, and others where it is persistent. All things being equal, certain meteorological and telluric conditions unknown up to the present time have to do with this predilection of the disease.

2. To collect in the lazaretto all lepers, in all stages of the disease, whom a medical board capable of diagnosing leprosy from its inception shall certify.

3. To prohibit marriage between lepers or persons suspected of leprosy, until a medical inspector shall authorize it.

4. To prohibit the use of salted food, spoiled potatoes, tarama, oil and pork, and to require at least one bath a week.

5. To have the lepers treated therapeutically, for experience shows that some cases are curable and all may be ameliorated by good hygiene and medical care intelligently directed.

6. To isolate all children of lepers, and put them under observation until the adult age, ordinarily the extreme term of the manifestation of hereditary leprosy.

7. To draw up and distribute among the people, pamphlets formulating hygienic principles, especially as regards cleanliness and food, the neglect of which appears to be a potent factor in the development of leprosy in those countries in which it is endemic.

The Samiotes are an uncleanly people. Many of them acknowledge to taking only one bath a year.

Leprosy, in the opinion of the writer, will progressively diminish and disappear by the observation of the preceding principles. It will definitely disappear only when the people shall be better housed, better fed, and have acquired better personal habits. The extirpation of leprosy appears to be synonymous with the extirpation of poverty.

CHOLERA IN MESOPOTAMIA.

Fourth article.

(Translated for this Bureau from the *Revue Medico-Pharmaceutique*, Constantinople, November 30, 1889.)

The cholera epidemic which has been experienced during the past four months by the population of Mesopotamia has made fresh progress. It has invaded the city of Mossoul, one of the principal centers of that country. This fact is not surprising to any one, for if on the one hand a hope for the arrest of the disease at the cordon of the Great Zâb might have been based on the progressive diminution of the disease in the infected districts, it was incontestable, on the other hand, that given the slow but sure march of the disease toward the north, and the vigor with which it attacked one by one most of the quarantine stations on the two rivers Zâb, it was evident that the disease would overthrow and clear the lines of defense and force the city of Mossoul to pay tribute.

After Erbil, attacked October 14, and which lost, up to November 2, 164 of its inhabitants, the appearance of cholera was noticed at Revendouz, a quarantine station on the Great Zâb. This locality was relatively less afflicted than others. From October 26 to November 17 only 75 deaths were reported there.

In the city of Mossoul the first choleraic death was reported on November 10. The following days, from the 11th to the 16th, about 5 deaths a day were reported. On the 18th the bulletin announced the number of deaths as 30. If, now, we compare the number of persons deceased during the nine first days at Bagdad and Mossoul, we find for Bagdad, from August 14 to 22, a total of 240 deaths, against 62 at Mossoul from November 10 to 18. It is not out of place here to remark that the population of these two great cities is not very different. Bagdad has, it is said, 70,000, and Mossoul about 80,000. Taking everything into account, the population and the figures furnished by the cholera bulletins, we find that at Mossoul the intensity of the disease is about 65 per cent. less than at Bagdad.

Although on this calculation we might base optimistic predictions, we think there is, on the contrary, reason for extreme reserve. We know, indeed, how cholera disappoints theoretic calculations. Very often, without any apparent reason, mortality ascends suddenly to 50, 60, 100 per cent. in 24 hours, and it is precisely where the disease was believed to be slight in extent that it shows considerable development.

It can not be concealed that the situation, if not grave, is at any rate serious; for from Mossoul diverge roads by which fugitives may reach other centers which they might contaminate.

We must then make use without reserve of the authority of the vilayet of Mossoul, and of the neighboring vilayets of Bitlis, Diarbekir, Aleppo, and Syria, which, conformably to the commands of his majesty the Sultan, and with the enlightened co-operation of the sanitary physicians, endeavor to restrict the spread of the plague. The ill success of the measures adopted up to the present time does not discourage them; and rightly, for if the cordons and sanitary stations have not been able to prevent cholera from invading three-fourths of Mesopo-

tamia and the Turco-Persian frontier, it is none the less true that they have considerably retarded its progress. The disease spreads still, but, as we have already remarked above, it has lost much of its force.

Apart from Mossoul and the less important cities of Suleïmaniah and Revendouz, which give rise to some anxiety, the rest of the contaminated country, especially the region to the south, is found in a tolerably satisfactory condition. The group of the cities of Mussayeb, Nedjef, Kerbela, Hindiah still offer a certain number of deaths, as also the old quarantine station of Coubeïssa, but there is no need for special concern in this connection.

With regard to the measures of defense, the cordon by the Great Zâb, Aïi-Hamman, Tell-Afar, is about to be replaced by another farther to the north, beginning at Katoum, on the frontier, and passing by Amadiah, Daoudiah, Zakko, Feïchabour on the Tigris, and Tchelaha. Leaving this station the cordon will follow the course of the river Hessaouï, tributary of the Khabour, to rejoin the stations of Tell-Kaukaub, Busseïra, Abour-Kemal, and Djuhb-Kavakep, which have been maintained. In addition, the competent authorities of the vilayets of Aleppo and Damascus are about to establish new cordons within the preceding, which could in time of need serve as lines of re-enforcement.

The following table indicates the choleraic mortality from October 25 to November 18. It shows a total of 275 deaths. Previously, from September 26 to October 25, the number of deaths reached 694.

Recapitulative table of choleraic mortality in Mesopotamia from October 25 to November 18, 1889.

Place.	Date.		Deaths.
	From—	To—	
Bassora	October 27		1
Bagdad	November 8		1
Musseyeb	October 25		2
Bakauba	November 5		1
Kerbela	October 25	October 28	18
Hindiah and environs	October 24	November 4	15
Nedjef	October 25		1
Altin-Keupru environs	October 29	November 4	5
Suleïmaniah	October 25	November 15	35
Coubeïssa	October 26	November 27	37
Hit	October 28		1
Erbil	October 24	November 2	21
Revendouz	October 26	November 17	75
Mossoul	November 10	November 18	62
			275
To which we must add the total of deaths returned from July 27 to October (see *Revue*, pp. 139, 154)			6,867
General total			7,142

MORTALITY TABLE, FOREIGN CITIES.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Nov. 23	5,642,015	1,737	.....	.....	.....	.....	22	25	35	37	.....
Paris	Nov. 23	2,260,945	968	.....	.....	1	.....	18	3	32	13	10
Glasgow	Nov. 23	545,678	243	.....	.....	.....	.....	3	4	3	.....	3
Glasgow	Nov. 30	545,678	229	.....	.....	.....	.....	1	6	4	5	.....
Warsaw	Nov. 16	445,770	245	.....	.....	28	.....	.....	11	15	.....	.....
Calcutta	Oct. 19	433,219	250	7	.....	.....	.....	.....	.....	.....	.....	.....
Calcutta	Oct. 26	433,219	223	8	.....	.....	.....	.....	.....	1	.....	.....
Calcutta	Nov. 2	433,219	263	9	.....	1	.....	.....	.....	.....	.....	.....
Rome	Sept. 21	407,936	170	.....	.....	1	.....	3	.....	1	.....	.....
Amsterdam	Nov. 23	399,051	.....	.....	.....	.....	.....	1	1	3	.....	.....
Amsterdam	Nov. 30	399,051	.....	.....	.....	.....	.....	.....	.....	4	.....	.....
Copenhagen	Nov. 16	307,000	105	.....	.....	.....	.....	1	1	12	.....	.....
Copenhagen	Nov. 23	307,000	108	.....	.....	.....	.....	2	2	4	.....	.....
Munich	Oct. 19	281,000	132	.....	.....	.....	.....	2	.....	11	.....	.....
Munich	Oct. 26	281,000	142	.....	.....	.....	.....	1	.....	9	.....	.....
Munich	Nov. 2	281,000	133	.....	.....	.....	.....	1	2	6	.....	.....
Munich	Nov. 9	281,000	112	.....	.....	.....	.....	.....	.....	8	.....	.....
Munich	Nov. 16	281,000	119	.....	.....	.....	.....	.....	.....	7	.....	.....
Edinburgh	Oct. 19	266,900	98	.....	.....	.....	.....	1	1	2	.....	2
Edinburgh	Oct. 26	266,900	79	.....	.....	.....	.....	.....	1	3	11	5
Palermo	Nov. 23	250,000	70	.....	.....	.....	.....	.....	.....	1	.....	.....
Bristol	Nov. 9	229,361	73	.....	.....	.....	.....	1	.....	.....	.....	.....
Bristol	Nov. 16	229,361	53	.....	.....	.....	.....	2	.....	.....	.....	.....
Bristol	Nov. 23	229,361	80	.....	.....	.....	.....	1	.....	.....	.....	.....
Bristol	Nov. 30	229,361	73	.....	.....	.....	.....	.....	1	.....	.....	.....
Rotterdam	Nov. 23	197,724	88	.....	.....	.....	.....	2	.....	.....	.....	.....
Genoa	Nov. 23	180,427	98	.....	.....	1	2	.....	.....	.....	.....	.....
Genoa	Nov. 30	180,427	102	.....	.....	.....	3	.....	.....	1	.....	.....
Toronto	Nov. 29	175,000	35	.....	.....	.....	.....	2	.....	2	.....	.....
Toronto	Dec. 6	175,000	61	.....	.....	.....	.....	57	.....	1	.....	.....
Trieste	Nov. 16	158,054	72	.....	.....	1	.....	.....	.....	1	.....	.....
Trieste	Nov. 23	158,054	65	.....	.....	2	.....	1	.....	4	.....	.....
Stuttgart	Nov. 23	125,510	40	.....	.....	.....	.....	.....	.....	6	.....	.....
Stuttgart	Nov. 30	125,510	49	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pernambuco	Nov. 5	120,000	86	.....	.....	.....	.....	1	2	.....	.....	.....
Pernambuco	Nov. 12	120,000	52	.....	.....	.....	1	.....	1	.....	.....	.....
Havre	Nov. 16	112,074	59	.....	.....	.....	.....	1	.....	1	.....	.....
Barmen	Nov. 16	109,000	49	.....	.....	.....	1	.....	.....	1	1	.....
Barmen	Nov. 23	109,000	35	.....	.....	.....	.....	.....	1	.....	.....	.....
Catania	Nov. 17	108,000	.....	.....	.....	.....	.....	.....	3	1	.....	1
Leghorn	Nov. 24	103,287	46	.....	.....	.....	.....	.....	.....	.....	.....	.....
Edinburgh	Oct. 19	76,400	30	.....	.....	.....	.....	.....	2	.....	.....	.....
Edinburgh	Oct. 26	76,400	32	.....	.....	.....	.....	.....	1	.....	.....	.....
Mayence	Nov. 16	65,802	14	.....	.....	.....	.....	.....	.....	4	.....	.....
Mayence	Nov. 23	65,802	40	.....	.....	.....	1	.....	.....	3	.....	.....
Cadiz	Nov. 23	57,157	55	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Nov. 28	23,800	29	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Nov. 17	23,681	3	.....	.....	.....	.....	.....	.....	1	.....	.....
Kingston, Can	Dec. 6	18,284	26	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Nov. 1	15,500	11	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Nov. 8	13,500	14	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Nov. 15	13,500	8	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	Nov. 23	13,500	12	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Nov. 23	7,428	2	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

WEEKLY ABSTRACT OF SANITARY REPORTS.

VOL. IV. { Abstract No. 52. }

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C., December 27, 1889.

Abstract of Domestic and Foreign Sanitary Reports received during the week ended December 27, 1889, published in accordance with section 4, Act of Congress, approved April 29, 1878.

UNITED STATES.

Circular.—Regulation to prevent the introduction of leprosy.

TREASURY DEPARTMENT.
OFFICE SUPERVISING SURGEON-GENERAL, M.-H. S.
Washington, D. C., December 23, 1889.

To medical officers of the Marine-Hospital Service, collectors of customs, and others concerned:

The national quarantine act approved April 29, 1878, entitled "An act to prevent the introduction of contagious or infectious diseases," provides that no vessel or vehicle coming from any foreign port or country where any contagious or infectious disease exists, or any vessel or vehicle conveying persons or animals affected with any contagious disease, shall enter any port of the United States or cross the boundary line between the United States and any foreign country, except in such manner as may be prescribed.

Attention is now directed to the increased prevalence of the contagious disease known as leprosy, in several foreign countries, and the danger of its increase in the United States through the immigration of persons affected with leprosy, and by direction of the Secretary of the Treasury the following regulation is framed under authority of the foregoing act subject to the approval of the President, to protect the people of the United States from the introduction of leprosy:

1. Until further orders, no vessel shall be admitted to entry by any officer of the customs until the master, owner or authorized agent of the vessel shall produce a certificate from the health officer or quarantine officer at the port of entry, or nearest United States quarantine officer, that no person affected with leprosy was on board the said vessel when admitted to free pratique, or in case a leper was found on board such vessel, that he or she with baggage has been removed from the vessel and detained at the quarantine station.

2. Medical officers in command of United States quarantines are hereby instructed to detain any person affected with leprosy found on board any vessel, but such officer will permit the departure on outgoing vessels of persons detained at quarantine in pursuance of this regulation, provided such vessel shall be bound to the foreign country from which the said leper shall have last sailed.

JOHN B. HAMILTON,
Supervising Surgeon-General, Marine-Hospital Service.

Approved: WILLIAM WINDOM, *Secretary.*
Approved: BENJ. HARRISON.

Special Reports.

U. S. MARINE-HOSPITAL SERVICE,
SURGEON'S OFFICE,
Boston, Mass., December 24, 1889.

SIR: I have the honor to inform you of the presence of influenza, or a form of catarrhal fever, in this hospital. About one-third of the attendants and quite a proportion of the patients are now suffering from the disease.

The form is mild, and treatment by quinine seems to give the best results.

Very respectfully,

FAIRFAX IRWIN,
Surgeon, M.-H. S.

SUPERVISING SURGEON-GENERAL,
U. S. MARINE-HOSPITAL SERVICE,
Washington, D. C.

Weekly mortality table of cities of the United States.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—									
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
New York, N. Y.	Dec. 21	1,593,651	665	.....	.....	.....	.....	.....	.....	5	10	24	5	8
Brooklyn, N. Y.	Dec. 21	843,602	333	.....	.....	.....	.....	.....	.....	3	3	26	.....	3
Baltimore, Md	Dec. 21	500,343	162	.....	.....	.....	.....	.....	.....	.....	.....	8	2	1
St. Louis, Mo.	Dec. 14	450,000	138	.....	.....	.....	.....	.....	.....	2	8	5	.....	.....
Boston, Mass.	Dec. 21	420,000	193	.....	.....	.....	.....	.....	.....	3	.....	17	.....	1
Cincinnati, Ohio	Dec. 21	325,000	110	.....	.....	.....	.....	.....	.....	3	.....	10	.....	2
New Orleans, La.	Dec. 7	254,000	141	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Orleans, La.	Dec. 14	254,000	109	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Detroit, Mich.	Dec. 14	250,000	75	.....	.....	.....	.....	.....	.....	.....	1	5	.....	.....
Detroit, Mich.	Dec. 21	250,000	65	.....	.....	.....	.....	.....	.....	.....	1	9	.....	.....
Louisville, Ky.	Dec. 14	227,000	57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minneapolis, Minn.	Dec. 21	200,000	51	.....	.....	.....	.....	.....	.....	7	2	4	.....	.....
Kansas City, Mo.	Dec. 14	180,000	36	.....	.....	.....	.....	.....	.....	.....	1	2	.....	.....
Kansas City, Mo.	Dec. 21	180,000	36	.....	.....	.....	.....	.....	.....	3	1	.....	.....	1
Rochester, N. Y.	Dec. 21	130,000	42	.....	.....	.....	.....	.....	.....	3	.....	1	.....	.....
Providence, R. I.	Dec. 14	127,000	51	.....	.....	.....	.....	.....	.....	1	.....	1	1	.....
Providence, R. I.	Dec. 21	127,000	37	.....	.....	.....	.....	.....	.....	.....	1	2	1	.....
Indianapolis, Ind.	Dec. 20	124,450	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Richmond, Va.	Dec. 14	100,000	43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toledo, Ohio	Dec. 20	89,000	26	.....	.....	.....	.....	.....	.....	.....	.....	5	.....	.....
Fall River, Mass.	Dec. 21	69,000	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nashville, Tenn.	Dec. 21	68,531	18	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Charleston, S. C.	Dec. 21	60,145	27	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Portland, Me.	Dec. 21	42,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Manchester, N. H.	Dec. 7	42,000	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Nov. 29	40,000	11	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Galveston, Tex.	Dec. 6	40,000	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Galveston, Tex.	Dec. 13	40,000	8	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Yonkers, N. Y.	Dec. 21	31,000	12	.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....
Altoona, Pa.	Dec. 14	30,000	7	.....	.....	.....	.....	.....	.....	.....	1	1	.....	.....
Binghamton, N. Y.	Dec. 21	30,000	9	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Auburn, N. Y.	Dec. 14	26,000	10	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Newport, R. I.	Dec. 19	22,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Newton, Mass.	Dec. 21	21,553	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rock Island, Ill.	Dec. 15	16,000	3	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Rock Island, Ill.	Dec. 22	16,000	2	.....	.....	.....	.....	.....	.....	.....	.....	2	.....	.....
Keokuk, Iowa	Dec. 21	16,000	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pensacola, Fla.	Dec. 14	15,000	8	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....

Consolidated mortality table of cities of the United States, compiled from weekly reports published in the present volume.

Cities.	Estimated population.	Number of weeks reported.	Total deaths from all causes.	Deaths from—										
				Cholera.	Yellow fever.	Small-pox.	Varioloid.	Varicella.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
New York, N. Y	1,593,651	51	38,549	.....	.....	1	.....	1	.....	190	1,244	1,666	478	623
Chicago, Ill	1,100,000	33	10,156	.....	.....	1	.....	1	.....	283	127	718	118	59
Philadelphia, Pa	1,040,245	48	18,873	.....	.....	.....	1	2	1	640	305	353	75	144
Brooklyn, N. Y	843,602	49	16,932	.....	.....	.....	.....	4	.....	156	265	1,036	206	269
Baltimore, Md	500,343	51	8,474	.....	.....	.....	.....	.....	.....	166	65	157	93	53
St. Louis, Mo	450,000	30	4,582	.....	.....	.....	.....	.....	.....	100	73	220	36	27
Boston, Mass	420,000	8	1,366	.....	.....	1	.....	.....	.....	33	2	97	.....	8
Cincinnati, Ohio	325,000	52	5,904	.....	.....	.....	.....	.....	.....	145	27	362	89	21
San Francisco, Cal	300,000	43	4,571	.....	.....	5	.....	.....	.....	114	14	76	3	19
New Orleans, La	254,000	48	5,582	.....	1	1	.....	.....	.....	38	7	133	20	15
Detroit, Mich	250,000	45	2,786	.....	.....	.....	.....	.....	.....	28	34	142	3	19
Washington, D. C	250,000	36	3,650	.....	.....	.....	.....	1	.....	108	23	90	4	45
Cleveland, Ohio	235,000	44	3,693	.....	.....	.....	.....	.....	.....	147	49	180	17	20
Pittsburgh, Pa	230,000	39	3,326	.....	.....	2	.....	.....	.....	185	64	161	47	32
Louisville, Ky	227,000	23	1,417	.....	.....	.....	.....	1	.....	49	2	12	12	22
Milwaukee, Wis	210,000	26	1,489	.....	.....	.....	.....	.....	.....	26	65	50	4	6
Minneapolis, Minn	200,000	49	2,103	.....	.....	.....	.....	.....	.....	96	33	181	3	3
Newark, N. J	180,145	32	2,808	.....	.....	.....	.....	.....	.....	71	42	160	18	25
St. Paul, Minn	180,000	9	332	.....	.....	.....	.....	.....	.....	17	11	22	4	.....
Kansas City, Mo	180,000	35	1,309	.....	.....	4	.....	.....	.....	27	12	21	7	4
Denver, Colo	135,000	49	1,623	.....	.....	13	1	.....	.....	163	18	68	7	6
Rochester, N. Y	130,000	46	1,864	.....	.....	.....	.....	.....	1	34	2	58	7	38
Providence, R. I	127,000	42	2,008	.....	.....	.....	.....	.....	.....	48	22	67	13	30
Indianapolis, Ind	124,450	17	499	.....	.....	.....	.....	.....	1	32	5	28	.....	2
Richmond, Va	100,000	48	1,805	.....	.....	.....	.....	.....	.....	34	1	18	1	13
Toledo, Ohio	89,000	50	1,134	.....	.....	.....	.....	.....	.....	21	11	92	.....	14
Camden, N. J	70,000	18	426	.....	.....	.....	.....	.....	.....	40	7	6	.....	.....
Fall River, Mass	69,000	50	1,416	.....	.....	.....	.....	.....	.....	40	30	16	8	6
Nashville, Tenn	68,531	51	1,103	.....	.....	.....	.....	.....	.....	46	5	4	1	5
Charleston, S. C	60,145	52	1,870	.....	.....	.....	.....	.....	.....	34	.....	8	9	2
Lynn, Mass	50,000	47	745	.....	.....	.....	.....	.....	.....	6	4	19	6	.....
Manchester, N. H	42,000	45	666	.....	.....	.....	.....	.....	.....	13	4	23	2	3
Portland, Me	42,000	46	654	.....	.....	.....	.....	.....	.....	9	1	6	2	.....
Galveston, Tex	40,000	51	585	.....	.....	.....	.....	.....	.....	12	.....	5	5	3
Council Bluffs, Iowa	35,000	38	219	.....	.....	.....	.....	.....	.....	1	5	31	.....	.....
Davenport, Iowa	33,715	22	184	.....	.....	.....	.....	.....	.....	.....	3	45	3	1
East Saginaw, Mich	33,000	16	160	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....
San Diego, Cal	32,000	22	83	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....
Yonkers, N. Y	31,000	14	118	.....	.....	.....	.....	.....	.....	2	3	2	.....	.....
Burlington, Iowa	30,166	5	32	.....	.....	.....	.....	.....	.....	.....	1	3	.....	.....
Altoona, Pa	30,000	52	350	.....	.....	.....	.....	.....	.....	9	1	17	.....	.....
Binghamton, N. Y	30,000	37	318	.....	.....	.....	.....	.....	.....	35	1	2	.....	3
Canton, Ohio	30,000	3	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Auburn, N. Y	26,000	51	436	.....	.....	.....	.....	.....	.....	3	4	22	.....	1
Haverhill, Mass	25,000	48	379	.....	.....	.....	.....	.....	.....	7	2	5	8	2
Newport, R. I	22,000	53	338	.....	.....	.....	.....	.....	.....	5	1	9	.....	.....
Newton, Mass	21,553	50	306	.....	.....	.....	.....	.....	.....	10	1	38	.....	3
Rock Island, Ill	16,000	23	83	.....	.....	.....	.....	.....	.....	.....	.....	28	.....	.....
Keokuk, Iowa	16,000	49	182	.....	.....	.....	.....	.....	.....	1	1	7	5	.....
Pensacola, Fla	15,000	45	242	.....	.....	.....	.....	.....	.....	10	.....	4	5	1

FOREIGN.

(Reports received through the Department of State and other channels.)

GREAT BRITAIN—*England and Wales.*—The deaths registered in 28 great towns of England and Wales during the week ended December 7 corresponded to an annual rate of 21.5 a thousand of the aggregate population, which is estimated at 9,555,406. The lowest rate was recorded in Birkenhead, viz, 14.2, and the highest in Plymouth, viz, 36.7 a thousand. Diphtheria caused 5 deaths in Salford, 2 in Liverpool, 2 in Preston, 2 in New Castle-upon-Tyne, and 2 in Sheffield.

London.—One thousand six hundred and eighty-three deaths were registered during the week, including measles, 41; scarlet fever, 24; diphtheria, 47; whooping-cough, 47; enteric fever, 18; and diarrhœa and dysentery, 12. The deaths from all causes corresponded to an annual rate of 20.2 a thousand. Diseases of the respiratory organs caused 432 deaths. In greater London 2,158 deaths were registered, corresponding to an annual rate of 20.0 a thousand of the population. In the "outer ring" the deaths included measles, 10; scarlet fever, 7; diphtheria, 11; and whooping-cough, 12.

Ireland.—The average annual death rate, represented by the deaths registered during the week ended December 7, in the 16 principal town districts of Ireland, was 27.0 a thousand of the population. The lowest rate was recorded in Drogheda, viz, 8.5, and the highest in Londonderry, viz, 37.4 a thousand. In Dublin and suburbs 188 deaths were registered, including diphtheria, 1; measles, 2; enteric fever, 11; typhus, 1; whooping-cough, 3; and diarrhœa, 3.

Scotland.—The deaths registered in eight principal towns during the week ended December 7 corresponded to an annual rate of 23.9 a thousand of the population, which is estimated at 1,314,274. The lowest mortality was recorded in Aberdeen, viz, 18.0, and the highest in Paisley, viz, 26.6 a thousand. The aggregate number of deaths registered from all causes was 612, including measles, 11; scarlet fever, 13; diphtheria, 9; whooping-cough, 20; fever, 4; and diarrhœa, 10.

Malta and Gozo.—One hundred and seventy-eight deaths were registered during the first half of November, 1889, including diphtheria, 4; and dysentery, 2.

FRANCE—*Marseilles.*—Seven hundred and twenty-nine deaths were registered during the month of November, 1889, including small-pox, 20; enteric fever, 27; scarlet fever, 4; diphtheria and croup, 28; measles, 11; whooping-cough, 4; and diarrhœa and enteritis, 52.

CUBA—*Havana.*—Four deaths from yellow fever were reported during the week ended December 12, 1889.

Cardenas.—December 13, 1889. Cool weather and good health in town and bay.

Weekly mortality table of foreign cities.

Cities.	Week ended.	Estimated population.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	Nov. 30	5,642,015	1,876	.....	.....	.....	.....	15	26	42	24	.....
Paris	Nov. 30	2,260,945	1,020	.....	.....	2	.....	28	5	30	17	8
Paris	Dec. 7	2,260,945	1,071	.....	.....	1	.....	45	2	31	11	8
Glasgow	Dec. 7	545,678	256	.....	.....	.....	.....	1	3	3	.....	.....
Warsaw	Nov. 23	445,770	261	.....	.....	41	.....	.....	5	16	.....	.....
Amsterdam	Dec. 7	399,051	184	.....	.....	.....	.....	.....	1	6	.....	.....
Copenhagen	Nov. 30	307,000	113	.....	.....	.....	.....	1	1	11	.....	.....
Palermo	Nov. 30	250,000	75	.....	.....	.....	.....	.....	1	3	.....	.....
Palermo	Dec. 7	250,000	96	.....	.....	.....	.....	.....	.....	1	.....	.....
Bristol	Dec. 7	229,361	87	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rotterdam	Dec. 7	197,724	83	.....	.....	.....	.....	.....	.....	1	.....	.....
Genoa	Dec. 7	180,427	104	.....	.....	.....	1	.....	.....	.....	.....	.....
Trieste	Nov. 30	158,054	77	.....	.....	1	.....	.....	.....	2	.....	.....
Stuttgart	Dec. 7	125,510	41	.....	.....	.....	.....	.....	.....	2	.....	.....
Barmen	Nov. 30	109,000	33	.....	.....	.....	.....	.....	2	.....	.....	.....
Barmen	Dec. 7	109,000	39	.....	.....	.....	.....	.....	.....	1	.....	2
Catania	Dec. 2	108,000	65	.....	.....	1	.....	1	3	1	.....	1
Leghorn	Dec. 7	103,287	56	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Nov. 16	57,157	58	.....	.....	.....	.....	.....	.....	3	.....	.....
Cadiz	Nov. 30	57,157	48	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cadiz	Dec. 7	57,157	54	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Dec. 5	23,800	34	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	Dec. 12	23,800	26	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gibraltar	Nov. 24	23,681	10	.....	.....	.....	.....	.....	.....	3	.....	.....
Gibraltar	Dec. 1	23,681	6	.....	.....	.....	.....	.....	.....	1	.....	.....
Kingston, Can	Dec. 13	18,284	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	Dec. 7	7,428	9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	Nov. 13	5,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	Nov. 20	5,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	Nov. 27	5,000	4	.....	.....	.....	.....	.....	.....	.....	.....	.....

Consolidated mortality table of foreign cities, compiled from weekly reports published in the present volume.

Cities.	Estimated population.	Number of weeks reported.	Total deaths from all causes.	Deaths from—								
				Cholera.	Yellow fever.	Small-pox.	Typhus fever.	Enteric fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping-cough.
London	5,642,015	36	62,405	.....	.....	2	.....	376	1,241	1,212	1,322	28
Paris	2,260,945	52	51,177	.....	.....	139	.....	915	168	1,654	1,227	439
Glasgow	545,978	52	12,884	.....	.....	.....	4	129	117	181	75	186
Buenos Ayres	516,000	4	1,329	.....	.....	10	.....	36	1	21	.....	.....
Warsaw	445,770	52	12,857	.....	.....	660	3	31	274	407	.....	.....
Calcutta	433,219	50	10,111	1,138	.....	52	.....	.....	.....	14	19	.....
Rome	407,936	41	7,566	.....	.....	87	.....	108	16	155	.....	.....
Amsterdam	399,051	46	8,008	.....	.....	.....	5	36	15	165	.....	.....
Cairo	374,838	4	1,547	.....	.....	44	.....	72	.....	2	17	10
Copenhagen	307,000	44	5,578	.....	.....	.....	.....	52	65	283	.....	.....
Rio de Janeiro	399,051	22	7,531	.....	136	119	206	96	1	10	.....	.....
Munich	281,000	46	7,719	.....	.....	.....	1	25	111	318	.....	.....
Edinburgh	266,900	41	3,441	.....	.....	2	13	22	31	76	18	21
Palermo	250,000	48	4,096	.....	.....	23	.....	2	73	95	.....	.....
Alexandria	231,396	4	758	.....	.....	8	2	4	.....	.....	22	.....
Belfast	229,622	31	3,421	.....	.....	.....	6	111	9	25	.....	.....
Bristol	229,361	41	3,043	.....	.....	.....	.....	23	14	9	.....	.....
Rotterdam	197,724	24	2,142	.....	.....	.....	.....	10	5	37	80	.....
Genoa	180,427	45	4,282	.....	.....	38	50	7	2	51	.....	.....
Port of Spain	178,270	2	74	.....	.....	.....	.....	.....	.....	.....	.....	.....
Toronto	175,000	29	1,131	.....	.....	.....	1	84	.....	34	.....	.....
Maceio	170,000	1	55	.....	.....	15	.....	.....	.....	.....	.....	.....
Trieste	158,054	50	3,824	.....	.....	48	.....	19	9	79	1	.....
Stuttgart	125,510	51	2,401	.....	.....	.....	2	2	37	101	3	.....
Bremen	122,000	2	82	.....	.....	.....	.....	1	1	3	.....	.....
Pernambuco	120,000	45	3,905	.....	23	3	81	55	59	.....	.....	.....
Havre	112,074	33	1,938	.....	.....	40	.....	51	7	14	3	1
Barmen	109,000	52	2,167	.....	.....	.....	17	.....	7	27	89	17
Catania	108,000	17	743	.....	.....	2	.....	11	22	16	.....	1
Leghorn	103,287	44	1,833	.....	.....	.....	.....	7	.....	8	.....	.....
Rheims	97,903	9	410	.....	.....	.....	.....	20	3	2	6	1
Leith	76,400	37	933	.....	.....	.....	1	5	14	25	.....	.....
Mayence	65,802	51	1,469	.....	.....	.....	10	1	26	78	.....	.....
Cadiz	57,157	53	2,490	.....	.....	1	.....	.....	.....	3	.....	.....
Merida	47,448	27	1,540	.....	.....	.....	2	4	1	3	.....	.....
Cienfuegos	40,655	12	208	.....	16	2	.....	1	.....	.....	.....	.....
Maracaibo	40,000	1	17	.....	.....	.....	.....	2	.....	.....	.....	.....
Guayaquil	35,000	25	2,076	.....	18	7	.....	65	.....	.....	68	.....
Ceara	29,000	4	155	.....	.....	.....	.....	.....	50	.....	.....	.....
Curaçoa	25,000	7	39	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vera Cruz	23,800	32	788	.....	.....	1	.....	.....	.....	.....	.....	.....
Gibraltar	23,681	45	465	.....	.....	5	.....	5	1	24	.....	.....
San Juan, Porto Rico	23,000	2	19	.....	2	.....	.....	.....	.....	.....	.....	.....
Cartagena	20,000	28	241	.....	.....	.....	.....	.....	.....	1	.....	.....
Kingston, Can	18,284	43	344	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Domingo	16,000	2	10	.....	.....	.....	.....	.....	.....	.....	.....	.....
Antigua	15,847	11	135	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cape Haytien	15,000	17	104	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Thomas	13,500	39	500	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laguayra	7,428	45	273	.....	.....	.....	.....	.....	.....	.....	.....	.....
Turk's Islands	5,000	19	98	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bluefields, Nic	2,000	2	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ruatan	1,500	2	3	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan del Norte	1,250	21	37	.....	.....	.....	.....	.....	.....	.....	.....	.....

JOHN B. HAMILTON,

Supervising Surgeon-General, Marine-Hospital Service.

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